

LAFARGE CANADA INC.

AMBIENT AIR QUALITY MONTHLY REPORT DECEMBER 2023

JANUARY 29, 2024



wsp



AMBIENT AIR QUALITY MONTHLY REPORT

DECEMBER 2023

LAFARGE CANADA INC.

PROJECT NO.: 171-00556-05
DATE: JANUARY 29, 2024

WSP
SUITE 1000
840 HOWE STREET
VANCOUVER, BC, CANADA V6Z 2M1

T: +1 604 685-9381
F: +1 604 683-8655
WSP.COM



January 29, 2024

LAFARGE CANADA INC.
Highway 1A
Exshaw, AB T0L 2C0

Attention: Nikolaos Veriotes P. Eng.

Dear Mr. Veriotes,

Subject: Ambient Air Quality Monthly Report – December 2023

The following table summarizes the data completeness and reported exceedances of Alberta Ambient Air Quality Objectives (AAAQOs) or Guidelines (AAAQG) at the Lagoon Station for December 2023.

Lagoon	Data Completeness (%)	1-Hour Average	24-hour Average
		Exceedances of AAAQO or AAAQG	Exceedances of AAAQO
TSP	100.0%	-	3
PM _{2.5}	100.0%	0	0
PM ₁₀	100.0%	-	-
NO	100.0%	-	-
NO ₂	100.0%	0	-
NO _x	100.0%	-	-
SO ₂	100.0%	0	0
Temperature	100.0%	-	-
Wind Speed / Direction	100.0%	-	-
Pressure	100.0%	-	-
Relative Humidity	100.0%	-	-
Precipitation	100.0%	-	-

SUITE 1000
840 HOWE STREET
VANCOUVER, BC, CANADA V6Z 2M1

T: +1 604 685-9381
F: +1 604 683-8655
wsp.com

The following table summarizes the data completeness and reported exceedances of Alberta Ambient Air Quality Objectives (AAAOs) or Guidelines (AAAQG) at the Windridge Station for December 2023.

Windridge	Data Completeness (%)	1-Hour Average	24-hour Average	
		Exceedances of AAAQG	Exceedances of PM _{2.5} AAAQO	Exceedances of TSP AAAQO
TSP	100.0%	-	-	5
PM _{2.5}	100.0%	0	0	-
PM ₁₀	100.0%	-	-	-

The GRIMM monitors are considered Industrial Ambient Monitors and are meant for assessing the performance of Lafarge Exshaw’s Fugitive Dust Control Best Management Practices – Program; the GRIMM monitors are not Air Monitoring Directive (AMD) compliant. This Program uses the AAAQOs as Guidelines. The following table summarizes the data completeness and exceedances of the Guidelines at the GRIMM Monitors for December 2023.

GRIMM Stations	Data Completeness (%)	1-Hour Average	24-hour Average	
		Exceedances of PM _{2.5} Guidelines	Exceedances of PM _{2.5} Guidelines	Exceedances of TSP Guidelines
West	0%	0	0	0
Berm	0%	0	0	0
Entrance	0%	0	0	0

I certify that I have reviewed and verified this report and that the information is complete, accurate and representative of the monitoring results, reporting timeframe and the specified analysis, summarization, and reporting requirements.

Sincerely,



Tyler Abel, M.Sc.
Senior Air Quality Specialist,
Vancouver Region

SIGNATURES

PREPARED BY



January 29, 2024

Tuonan Li, M.Sc.
Air Quality Specialist
Vancouver Region, Environment

Date

APPROVED¹ BY *(must be reviewed for technical accuracy prior to approval)*



January 29, 2024

Tyler Abel, M.Sc.
Senior Air Quality Specialist
Vancouver Region, Environment

Date

WSP Canada Inc. (WSP) prepared this report solely for the use of the intended recipient, LAFARGE CANADA INC., in accordance with the professional services agreement. The intended recipient is solely responsible for the disclosure of any information contained in this report. The content and opinions contained in the present report are based on the observations and/or information available to WSP at the time of preparation. If a third party makes use of, relies on, or makes decisions in accordance with this report, said third party is solely responsible for such use, reliance or decisions. WSP does not accept responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken by said third party based on this report. This limitations statement is considered an integral part of this report.

The original of this digital file will be conserved by WSP for a period of not less than 10 years. As the digital file transmitted to the intended recipient is no longer under the control of WSP, its integrity cannot be assured. As such, WSP does not guarantee any modifications made to this digital file subsequent to its transmission to the intended recipient.

¹ Approval of this document is an administrative function indicating readiness for release and does not impart legal liability on to the Approver for any technical content contained herein. Technical accuracy and fit-for-purpose of this content is obtained through the review process. The Approver shall ensure the applicable review process has occurred prior to signing the document.



TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	Exshaw Creek Flood Mitigation	1
2	DECEMBER 2023 REPORT SUMMARY	3
2.1	Lagoon Station	3
2.2	Windridge Station	4
2.3	West Grimm	4
2.4	Berm Grimm	5
2.5	Entrance Grimm	5
3	LAGOON STATION	6
3.1	Operational Summary	6
3.2	Monitoring Results and Trends	7
4	WINDRIDGE STATION	19
4.1	Operational Summary	19
4.2	Monitoring Results and Trends	19
	BIBLIOGRAPHY	29

TABLES

TABLE 2-1	LAGOON STATION DATA SUMMARY	3
TABLE 2-2	WINDRIDGE STATION DATA SUMMARY	4
TABLE 3-1	INSTRUMENTATION LIST AT THE LAGOON STATION	6
TABLE 3-2	SUMMARY OF DECEMBER 2023 DATA AT LAGOON	8
TABLE 4-3	DAYS EXCEEDING THE TSP AAAQO OR PM _{2.5} AAAQO AT THE LAGOON STATION	9



TABLE 4-1	INSTRUMENTATION LIST AT THE WINDRIDGE MONITORING LOCATION	19
TABLE 4-2	SUMMARY OF DECEMBER 2023 DATA AT THE WINDRIDGE STATION	21
TABLE 4-3	DAYS EXCEEDING THE TSP AAAQO OR PM _{2.5} AAAQO AT THE WINDRIDGE STATION	22

FIGURES

FIGURE 1-1	LOCATIONS OF AIR QUALITY MONITORS IN EXSHAW	1
FIGURE 1-2	PHOTO OF COMPLETED FLOOD MITIGATION WORK AT EXSHAW CREEK.....	2
FIGURE 3-1	INLETS ON THE TOP OF WSP'S LAGOON MONITOR	7
FIGURE 3-2	1-HOUR CONCENTRATIONS OF NO _x , SO ₂ , PARTICULATE MATTER, WIND DIRECTION AND WIND SPEED AT THE LAGOON STATION	10
FIGURE 3-3	HISTOGRAM OF HOURLY NO ₂ CONCENTRATIONS AT THE LAGOON STATION.....	11
FIGURE 3-4	HISTOGRAM OF HOURLY SO ₂ CONCENTRATIONS AT THE LAGOON STATION.....	11
FIGURE 3-5	HISTOGRAM OF HOURLY PM _{2.5} CONCENTRATIONS AT THE LAGOON STATION.....	12
FIGURE 3-6	HISTOGRAM OF HOURLY PM ₁₀ CONCENTRATIONS AT THE LAGOON STATION.....	12
FIGURE 3-7	HISTOGRAM OF HOURLY TSP CONCENTRATIONS AT THE LAGOON STATION.....	13
FIGURE 3-8	24-HOUR CONCENTRATIONS OF NO _x , SO ₂ , AND PARTICULATE MATTER AT THE LAGOON MONITOR	14
FIGURE 3-9	WIND ROSE FOR TSP EXCEEDANCE DAYS RECORDED AT THE LAGOON STATION.....	15



FIGURE 3-10	LAGOON MONITOR PARTICULATE MATTER TIME VARIATION	16
FIGURE 3-11	LAGOON MONITOR SO ₂ TIME VARIATION	17
FIGURE 3-12	LAGOON MONITOR NO _x TIME VARIATION	18
FIGURE 4-1	1-HOUR PARTICULATE MATTER CONCENTRATIONS RECORDED AT THE WINDRIDGE MONITOR	23
FIGURE 4-2	HISTOGRAM OF HOURLY PM _{2.5} CONCENTRATIONS AT THE WINDRIDGE STATION	24
FIGURE 4-3	HISTOGRAM OF HOURLY PM ₁₀ CONCENTRATIONS AT THE WINDRIDGE STATION	24
FIGURE 4-4	HISTOGRAM OF HOURLY TSP CONCENTRATIONS AT THE WINDRIDGE STATION	25
FIGURE 4-5	24-HOUR PARTICULATE MATTER CONCENTRATIONS AT THE WINDRIDGE MONITOR	26
FIGURE 4-6	WIND ROSE FOR TSP EXCEEDANCE DAYS RECORDED AT THE WINDRIDGE STATION	27
FIGURE 4-7	WINDRIDGE PARTICULATE MATTER TIME VARIATION	28

APPENDICES

A DATA & CALIBRATION REPORTS

1 INTRODUCTION

This report summarizes the ambient air quality and meteorological data collected at the Lagoon, Windridge, and GRIMM monitors in Exshaw, AB (Figure 1-1). The stations are operated by WSP on behalf of Lafarge Canada Inc. (Lafarge) and are a requirement of Lafarge’s Approval 1702-02-04. This report contains data collected between December 1, 2023 and December 31, 2023.

This monthly report was prepared by Tuonan Li, Air Quality Specialist with WSP, on behalf of Lafarge and was reviewed by Tyler Abel, Senior Air Quality Specialist at WSP.

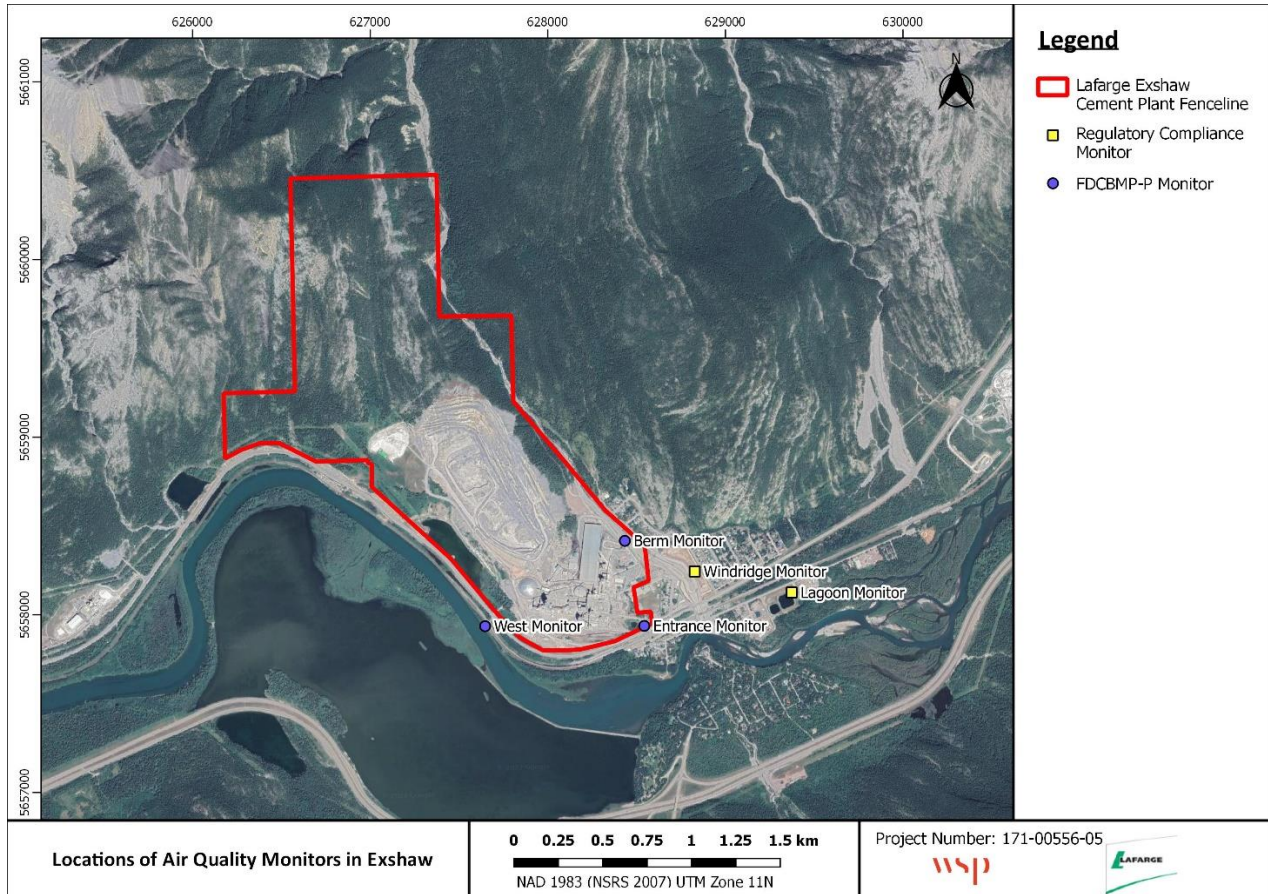


Figure 1-1 Locations of Air Quality Monitors in Exshaw

1.1 EXSHAW CREEK FLOOD MITIGATION

Due to flood mitigation construction at Exshaw creek (Figure 1-2), the Windridge monitoring station was taken out of operation and removed from the site on April 8, 2019. The flood mitigation work was completed in Summer 2020. The Windridge station was reinstalled on September 1, 2020. The flood mitigation work has left an exposed creek bed area (see Figure below) that is a potential source of fugitive dust between Lafarge’s eastern fenceline and the Windridge station.



Figure 1-2 Photo of Completed Flood Mitigation Work at Exshaw Creek

2 DECEMBER 2023 REPORT SUMMARY

This summary section provides the pertinent details on data collected and maintenance/calibration activities at each of the monitoring locations. The monitoring results for each station are described in further detail in their corresponding sections. Maximum hourly concentrations are shown for all particulate matter size fractions, but there are no Alberta Ambient Air Quality Objectives (AAAQO) for 1-hour PM concentrations. The exceedances reported for 1-hour PM_{2.5} are those above the 1-hour PM_{2.5} Alberta Ambient Air Quality Guidelines (AAAQG).

2.1 LAGOON STATION

Table 2-1 Lagoon station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of AAAQO or AAAQG	Maximum Concentration	Exceedances of AAAQO
NO₂ (ppb)	100.0	29.4	0	13.6	-
SO₂ (ppb)	100.0	2.3	0	0.9	0
PM_{2.5} (µg/m³)	100.0	16.3	0 ¹	3.8	0
PM₁₀ (µg/m³)	100.0	308.5	-	68.3	-
TSP (µg/m³)	100.0	424.5	-	143.3	3
Temperature (°C)	100.0	11.6	-	8.3	-
Wind Speed (km/hr) /Direction (Degrees)	100.0	59.0/W	-	30.9/WSW	-
Precipitation (mm)	100.0	1.3 ²	-	13.75 ³	-

¹ Any exceedances reported for 1-hour PM_{2.5} are over the guideline level (AAAQG) of 80 µg/m³.

² Maximum Daily Total Accumulation of Precipitation (mm) – freezing temperatures can impact the precipitation totals in winter months

³ Monthly Total Accumulation of Precipitation (mm) - freezing temperatures can impact the precipitation totals in winter months

Data Quality Notes:

- There were no exceedances of the 24-hour PM_{2.5} AAAQO.
- There were no exceedances of the 1-hour PM_{2.5} AAAQG.
- There were 3 exceedances of the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

- At the Lagoon station, NO₂ and SO₂ analyzers recorded 100% uptime during the month of December.
- The TSP, PM₁₀ and PM_{2.5} analyzers recorded 100% uptime for the month of December.
- The meteorological sensors recorded 100% uptime for the month of December.

2.2 WINDRIDGE STATION

Table 2-2 Windridge station data summary

Parameter	Data Completeness (%)	1-Hour Average		24-hour Average	
		Maximum Concentration	Exceedances of AAAQG	Maximum Concentration	Exceedances of AAAQO
PM _{2.5} (µg/m ³)	100.0	30.0	0*	5.9	0
PM ₁₀ (µg/m ³)	100.0	485.0	-	157.6	-
TSP (µg/m ³)	100.0	985.0	-	259.6	5

* Any exceedances reported for 1-hour PM_{2.5} are over the guideline level (AAAQG) of 80 µg/m³.

Data Quality Notes:

- There were no exceedances of the 24-hour PM_{2.5} AAAQO.
- There were no exceedances of the 1-hour PM_{2.5} AAAQG.
- There were 5 days exceeding the 24-hour TSP AAAQO.

Calibration/Maintenance Notes:

- At the Windridge station, the TSP, PM₁₀ and PM_{2.5} analyzers recorded 100% uptime for the month of December.

2.3 WEST GRIMM

The GRIMM monitors are Industrial Ambient Monitors meant to aid Lafarge in assessing the performance of their Fugitive Dust Control Best Management Practices – Program (FDCBMP-P). The AAAQO are used as Guidelines to evaluate the performance of the FDCBMP-P; however, these Industrial monitors are not Alberta Air Monitoring Directive (AMD) compliant and not required to show compliance with the AAAQO.

Calibration/Maintenance Notes:

- The analyzer had 0% uptime for the month of December due to collection error (updating IP address on server).

2.4 BERM GRIMM

The GRIMM monitors are Industrial Ambient Monitors meant to aid Lafarge in assessing the performance of their FDCBMP-P. The AAAQO are used as Guidelines to evaluate the performance of the FDCBMP-P; however, these Industrial monitors are not Alberta Air Monitoring Directive (AMD) compliant and not required to show compliance with the AAAQO.

Calibration/Maintenance Notes:

- The analyzer had 0% uptime for the month of December due to collection error (updating IP address on server).

2.5 ENTRANCE GRIMM

The GRIMM monitors are Industrial Ambient Monitors meant to aid Lafarge in assessing the performance of their FDCBMP-P. The AAAQO are used as Guidelines to evaluate the performance of the FDCBMP-P; however, these Industrial monitors are not Alberta Air Monitoring Directive (AMD) compliant and not required to show compliance with the AAAQO.

Calibration/Maintenance Notes:

- The analyzer had 0% uptime for the month of December due to communication error and was sent to the factory for repairs.

3 LAGOON STATION

The Lagoon trailer contains NO_x, SO₂, TSP, PM₁₀, and PM_{2.5} analyzers as well as meteorological sensors, and is shown in Figure 3-1. An ambient air quality station has been at this location since 2002, providing a long-term data record for air quality in the Exshaw area.

This section provides a summary of the monitoring activities for the Lagoon ambient air quality station, including: a table of instrumentation (Table 3-1), a data summary table (Table 3-2), site visit notes and tables and graphs illustrating the monitoring results for December 2023.

All of the monitors comply with Alberta Environment and Parks Air Monitoring Directive (2016).

3.1 OPERATIONAL SUMMARY

A summary of the station operation for the month is provided in Table 3-1.

Table 3-1 Instrumentation List at the Lagoon Station

Parameter Measured	Equipment Description	Notes
PM_{2.5} Concentrations	MetOne BAM-1020 FRM Continuous Particulate Monitor	The PM _{2.5} monitor was calibrated on December 21 st . The monitor had 100% uptime for the month of December.
PM₁₀ Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The PM ₁₀ monitor was calibrated on December 21 st . The monitor had 100% uptime for the month of December.
TSP Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The TSP monitor was calibrated on December 21 st . The monitor had 100% uptime for the month of December.
Oxides of Nitrogen	TEI 42C	The NO _x monitor was calibrated on December 12 th . The monitor had 100% uptime for the month of December.
Sulphur Dioxide	Teledyne API 102A	The SO ₂ monitor was calibrated on December 12 th . The monitor had 100% uptime for the month of December.
Precipitation	MetOne 130 Rain/Snow Gauge	The monitor had 100% uptime for the month of December.
Wind Speed	MetOne Wind Sensor	The monitor had 100% uptime for the month of December.
Wind Direction		

Ambient Temperature	MetOne Ambient Temperature Sensor	The monitor had 100% uptime for the month of December.
----------------------------	-----------------------------------	--



Figure 3-1 Inlets on the top of WSP’s Lagoon monitor

3.2 MONITORING RESULTS AND TRENDS

Table 3-2 summarizes the hourly and daily concentrations recorded in December 2023. Figure 3-2 graphically illustrates the time series for hourly concentrations as well as wind speed and direction, while Figure 3-8 shows daily average concentrations recorded during December 2023 for the pollutants listed in Table 3-2. Additionally, Figure 3-3 to Figure 3-7 show the histograms of the hourly concentrations of NO₂, SO₂, PM_{2.5}, PM₁₀, and TSP measured at the Lagoon station.

There were 3 days exceeding the 24-hour TSP AAAQO (100 µg/m³). There were no exceedances of the 24-hour PM_{2.5} AAAQO (29 µg/m³) or the 1-hour PM_{2.5} AAQG (80 µg/m³) at the station this month.

Historically in December, the average number of 24-hour TSP AAAQO exceedances and 24-hour PM_{2.5} AAAQO exceedances are both 0. The maximum number of 24-hour TSP AAAQO exceedances recorded in December were 2 days in 2018.

At the Lagoon station strong wind gusting that typically occurs in the area contributes to increased particulate levels that may arise from multiple sources including the Lafarge Plant, Exshaw Creek, dry sections of the Bow River, highway and rail traffic moving past the station and fugitive emissions from open areas.

Table 3-2 Summary of December 2023 data at Lagoon

Parameter	Guideline / Objectives		Station	Exceedances		Monthly		1-hour				24-hour		Operational Time (Percent)	
	1-hr	24-hr		1-hr	24-hr	Minimum	Average	Maximum Concentration/ Meteorological Variable	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration/ Meteorological Variable		Day
NO₂ (ppb)	159	-	Lagoon	0	-	0.6	5.5	29.4	17	8	7.6	57.0	13.6	14	100.0
SO₂ (ppb)	172	48	Lagoon	0	0	0.0	0.5	2.3	8	14	8.2	42.4	0.9	19	100.0
PM_{2.5} (µg/m³)	80	29	Lagoon	0	0	0.0	1.6	16.3	12	16	26.2	278.6	3.8	3	100.0
PM₁₀ (µg/m³)	-	-	Lagoon	-	-	0.0	21.7	308.5	9	20	59.0	247.1	68.3	1	100.0
TSP (µg/m³)	-	100	Lagoon	-	3	0.3	39.4	424.5	1	11	23.3	279.2	143.3	1	100.0
Temperature (°C)	-	-	Lagoon	-	-	-11.2	-0.2	11.6	5	13	9.8	267.1	8.3	22	100.0
Wind Speed (km/hr)/Direction (degrees)	-	-	Lagoon	-	-	0.0	20.4	59.0/W	9	20	59.0	247.1	30.9/WSW	10	100.0
Precipitation (mm)	-	-	Lagoon	-	-	0.0	0.0	1.3 ¹	7	5	0.0	357.7	13.8 ²	-	100.0

¹ Maximum Daily Total Accumulation of Precipitation (mm) - freezing temperatures can impact the precipitation totals in winter months

² Monthly Total Accumulation of Precipitation (mm) - freezing temperatures can impact the precipitation totals in winter months

Table 3-3 Days exceeding the TSP AAAQO or PM_{2.5} AAAQO at the Lagoon Station

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
Windridge						
2023-12-01	143.3	-	260.3	25.3	57.1	high wind event
2023-12-03	111.2	-	251.6	27.7	47.0	high wind event
2023-12-13	125.3	-	281.5	29.6	50.7	high wind event
Total # of Exceedances	3	0				
Maximum # of Exceedances (December)	2 (2018)	0 (2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022)				
Average # of Exceedances (December)	0	0				
Minimum # of Exceedances (December)	0 (2010, 2012, 2013, 2014, 2016, 2017, 2019, 2020, 2021, 2022)	0 (2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022)				

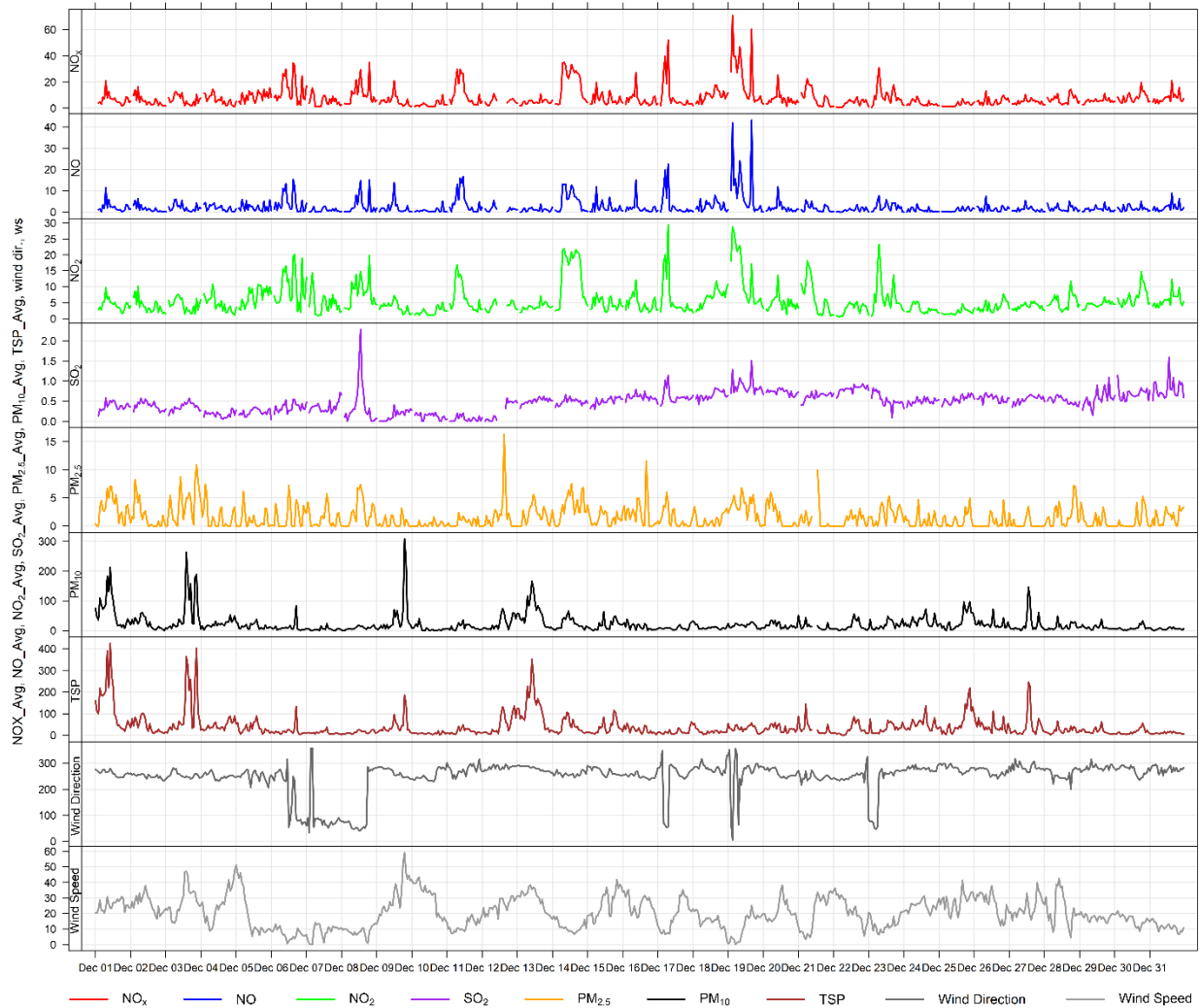


Figure 3-2 1-hour concentrations of NO_x, SO₂, particulate matter, wind direction and wind speed at the Lagoon station

Histogram of Hourly NO₂ Readings

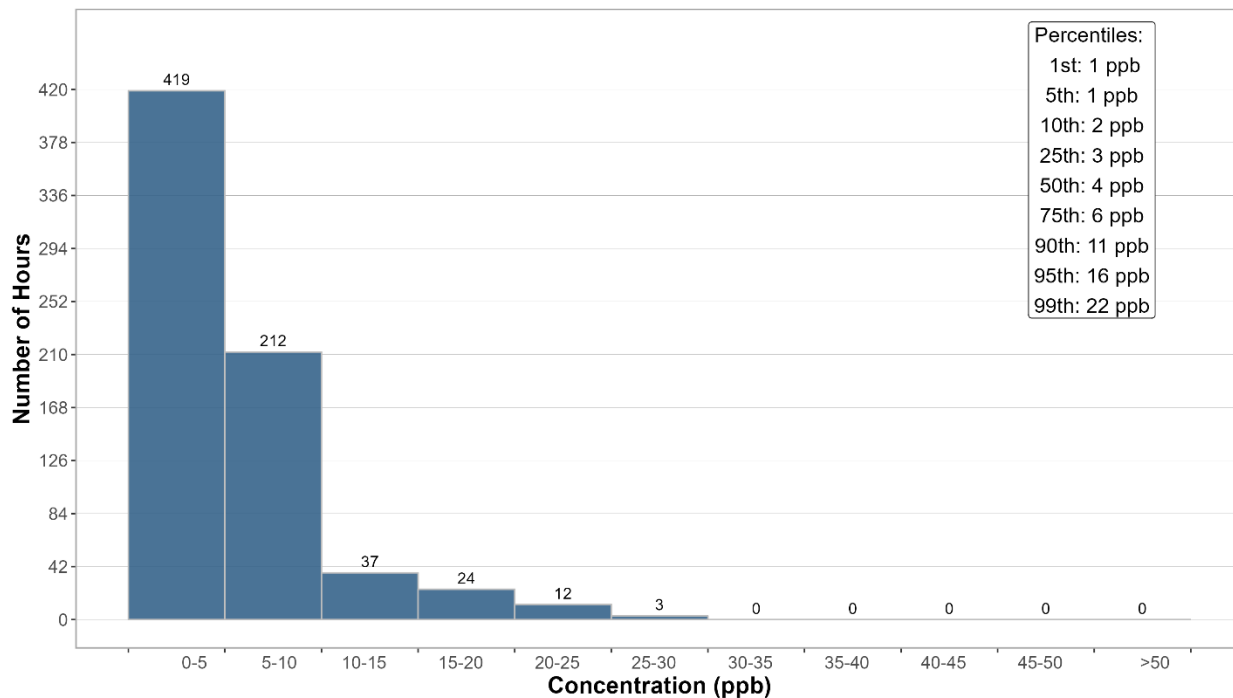


Figure 3-3 Histogram of hourly NO₂ concentrations at the Lagoon station

Histogram of Hourly SO₂ Readings

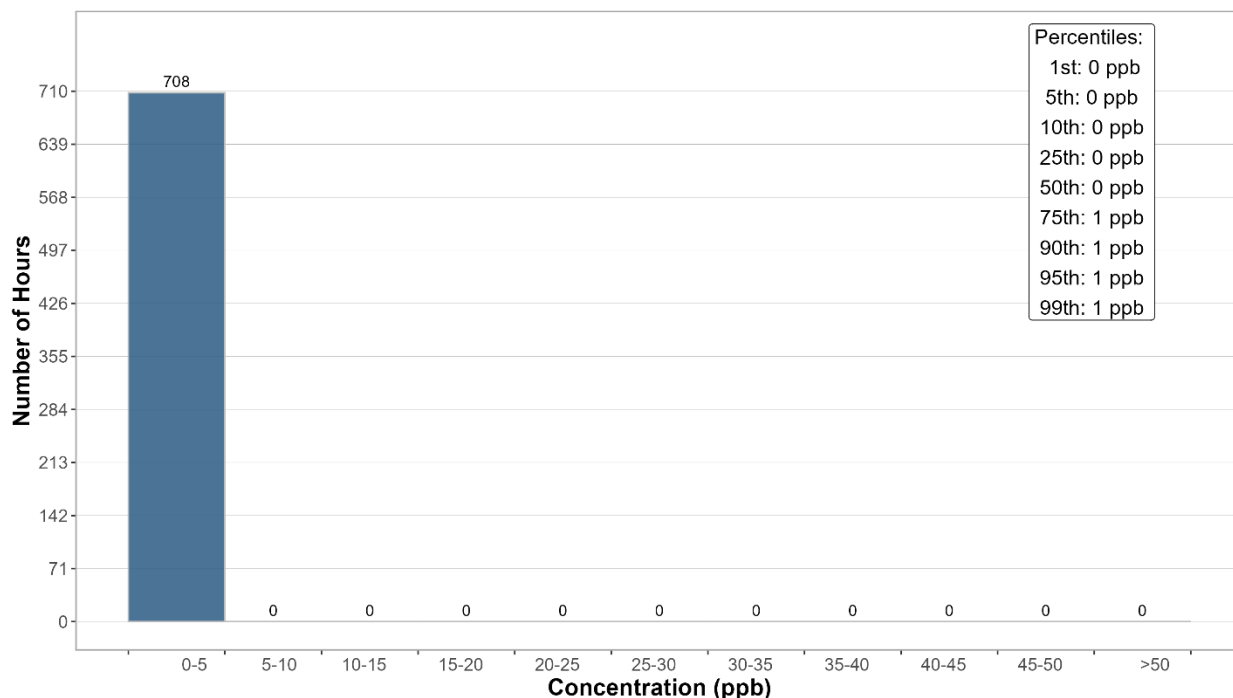


Figure 3-4 Histogram of hourly SO₂ concentrations at the Lagoon station

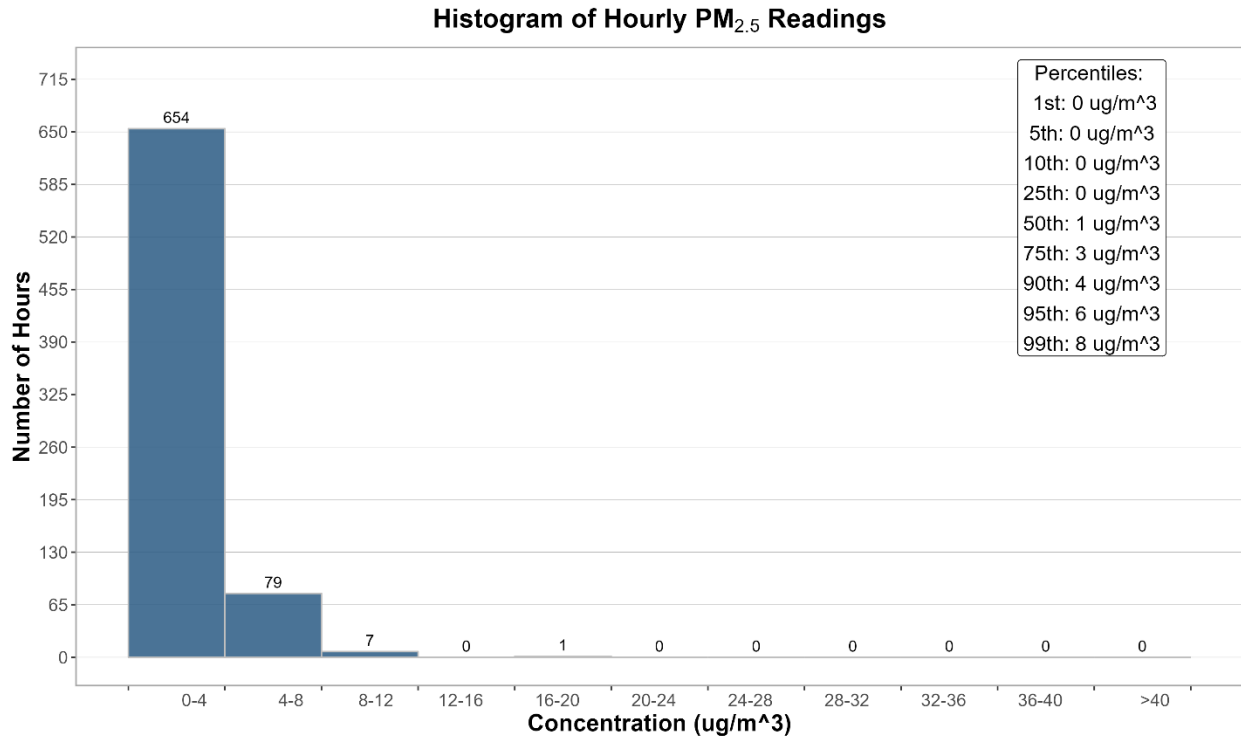


Figure 3-5 Histogram of hourly PM_{2.5} concentrations at the Lagoon station

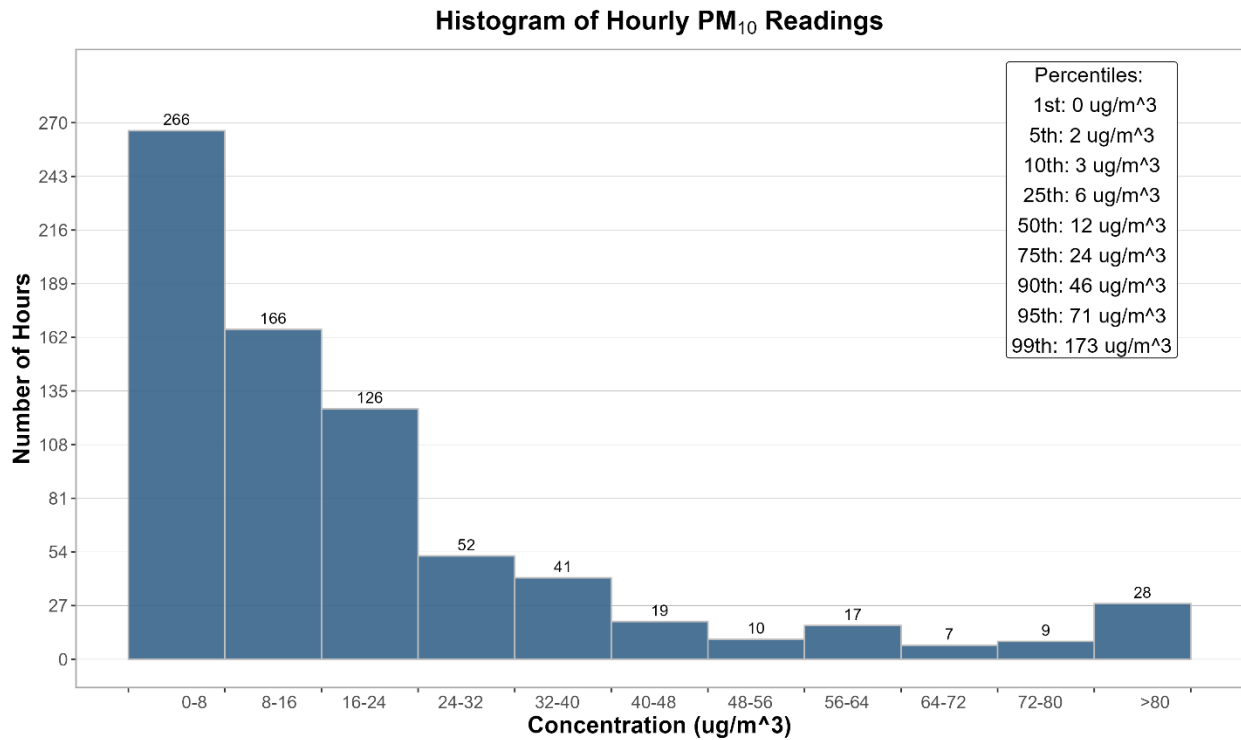


Figure 3-6 Histogram of hourly PM₁₀ concentrations at the Lagoon station

Histogram of Hourly TSP Readings

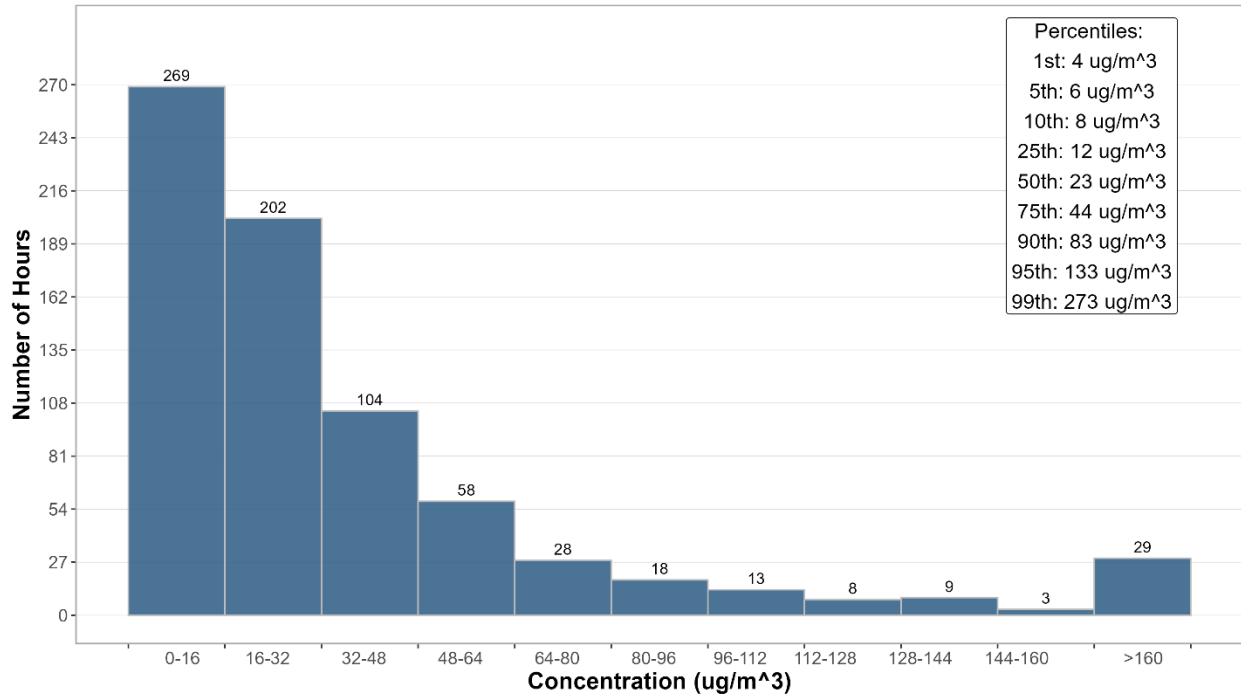


Figure 3-7 Histogram of hourly TSP concentrations at the Lagoon station

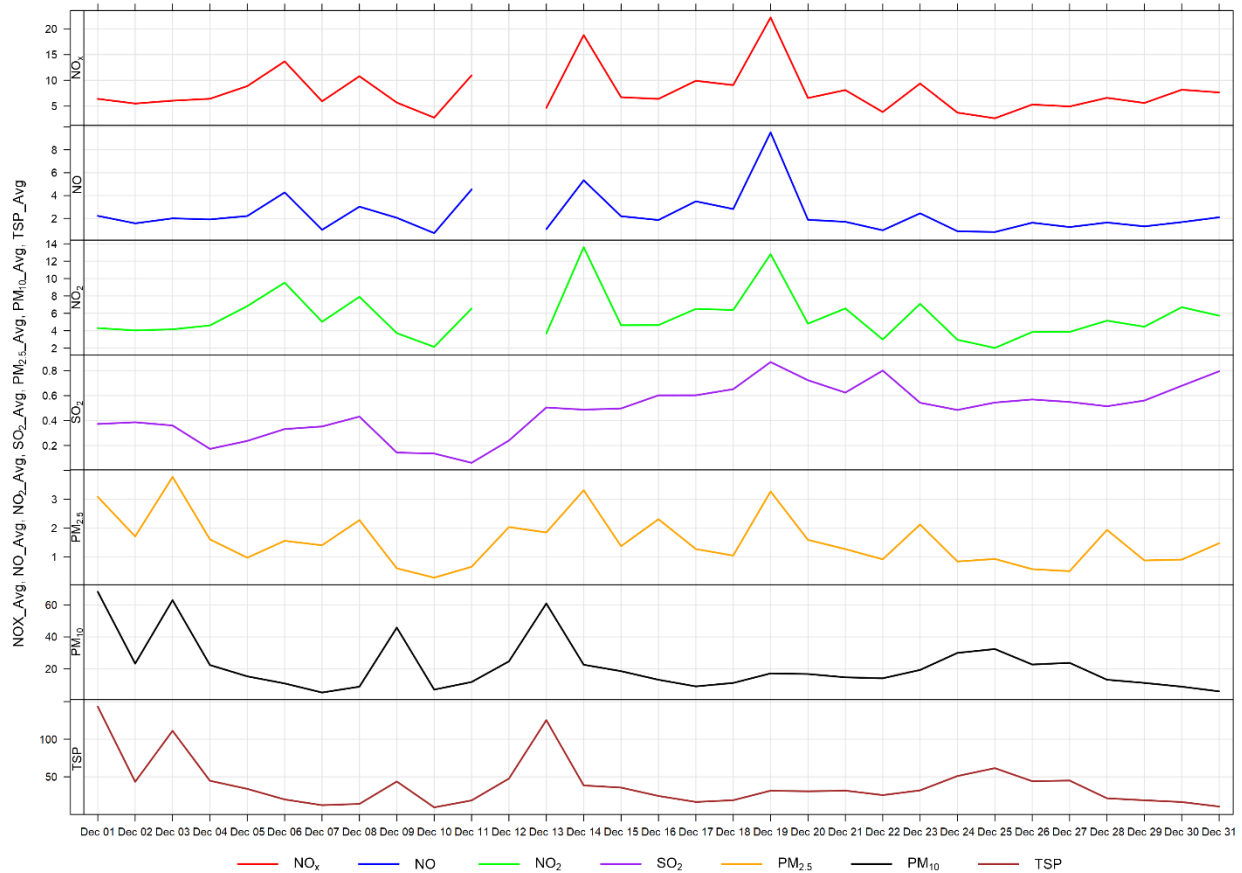


Figure 3-8 24-hour concentrations of NO_x, SO₂, and particulate matter at the Lagoon monitor

Figure 3-9 shows the wind rose for the 3 days of exceedance in December. The wind rose shows that the winds predominately came from the west, in high wind speed (25 km/h), suggesting impacts of windblown dust from the direction of the Lafarge Facility.

Figure 3-10 through Figure 3-12 show the variation in concentrations over various time averaging periods for PM, SO₂ and NO_x. The particulate matter plot in Figure 3-10 typically shows that PM₁₀ and TSP concentrations have a diurnal pattern associated with Lafarge operations, daytime emissions from traffic and other airshed activities. The diurnal patterns also typically follow the diurnal pattern of higher wind speeds during the daytime hours.

Figure 3-11 shows the variation of SO₂ over various time periods. SO₂ concentrations patterns are dependent on the timing of the highest SO₂ concentrations recorded in the month because in general SO₂ concentrations are very low. Figure 3-12 shows the variation of NO_x, NO and NO₂, with the peak of all three pollutants occurring in the early morning. This may be indicative of a peak in traffic.

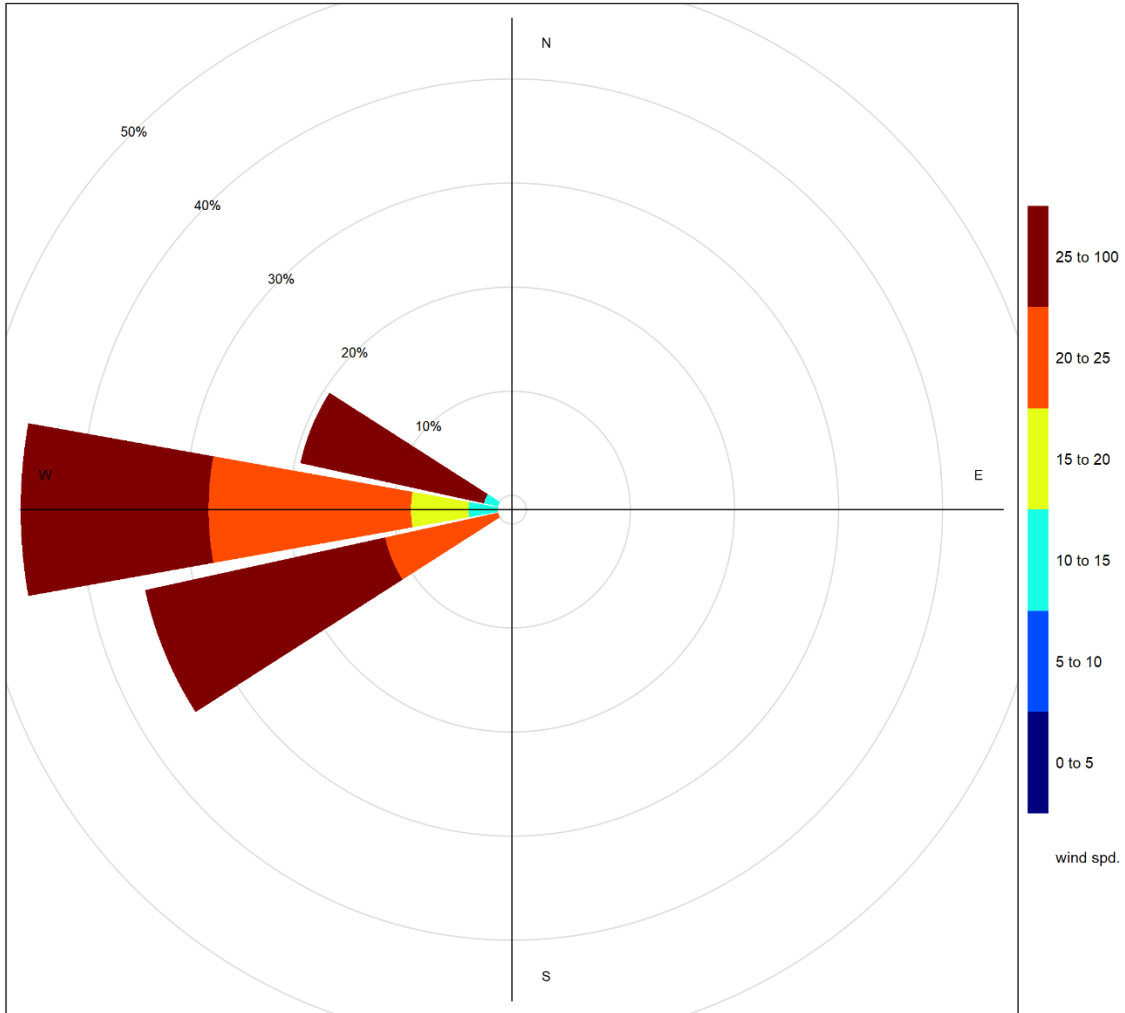


Figure 3-9 Wind rose for TSP exceedance days recorded at the Lagoon Station

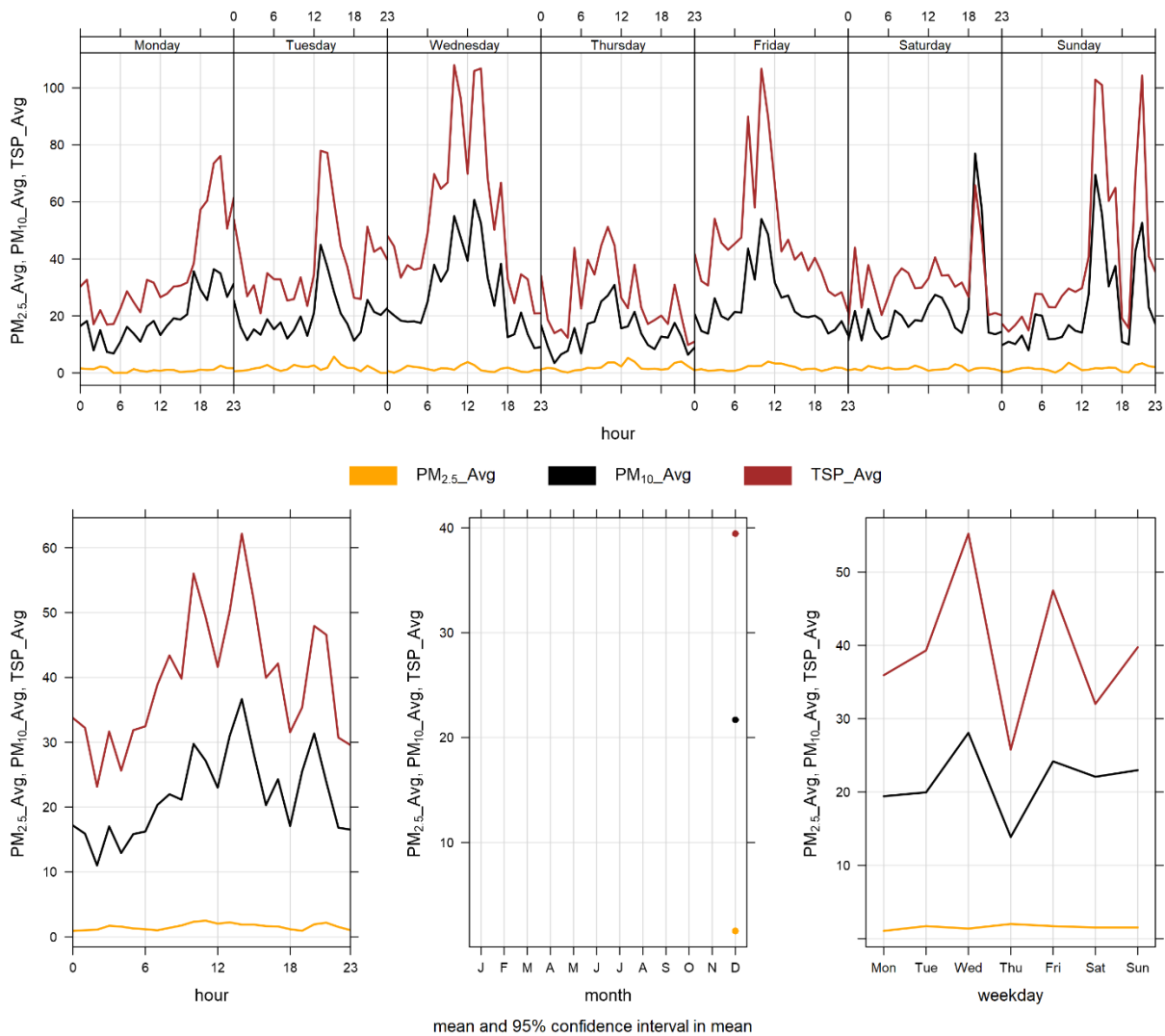


Figure 3-10 Lagoon monitor particulate matter time variation

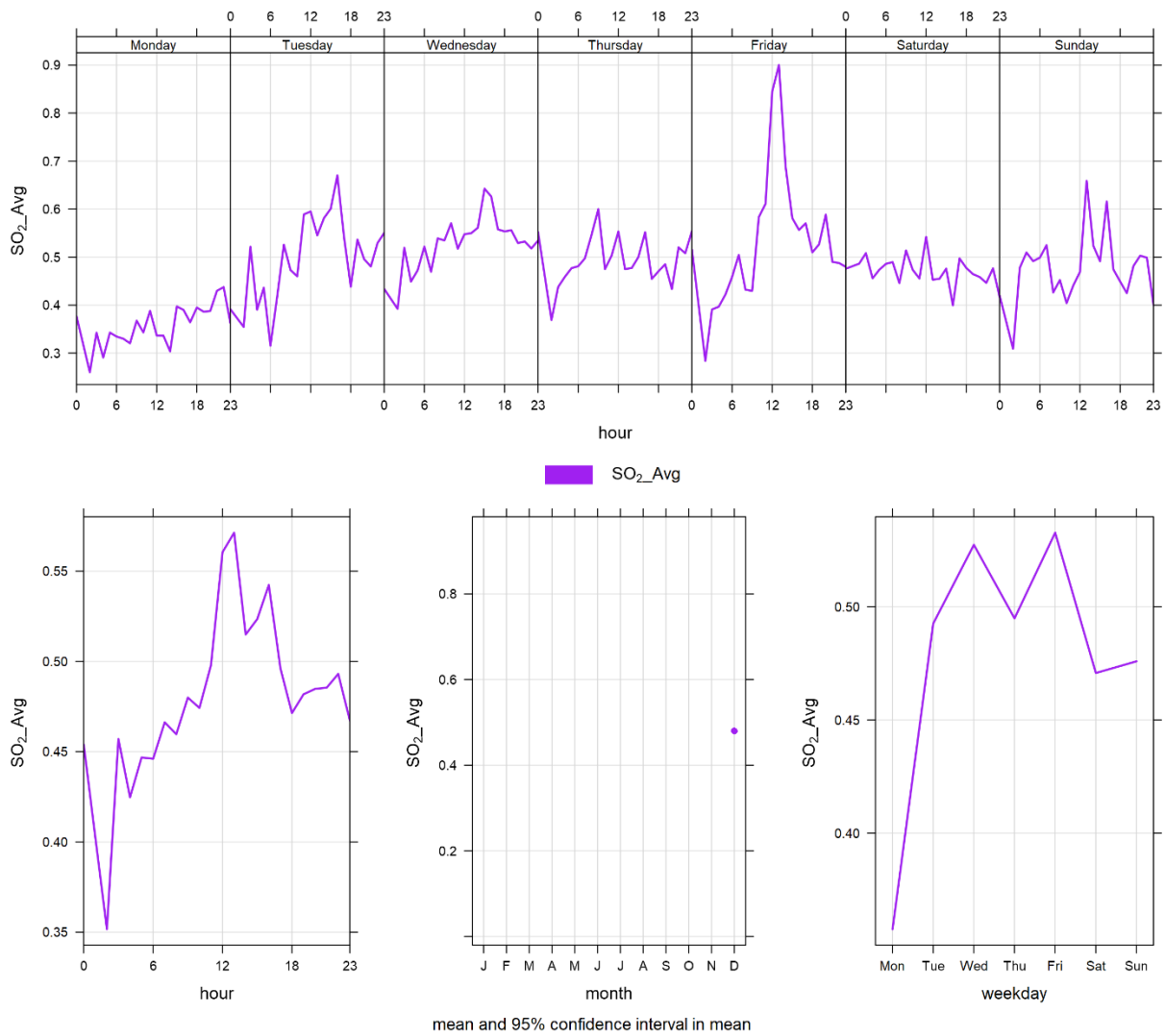


Figure 3-11 Lagoon monitor SO₂ time variation

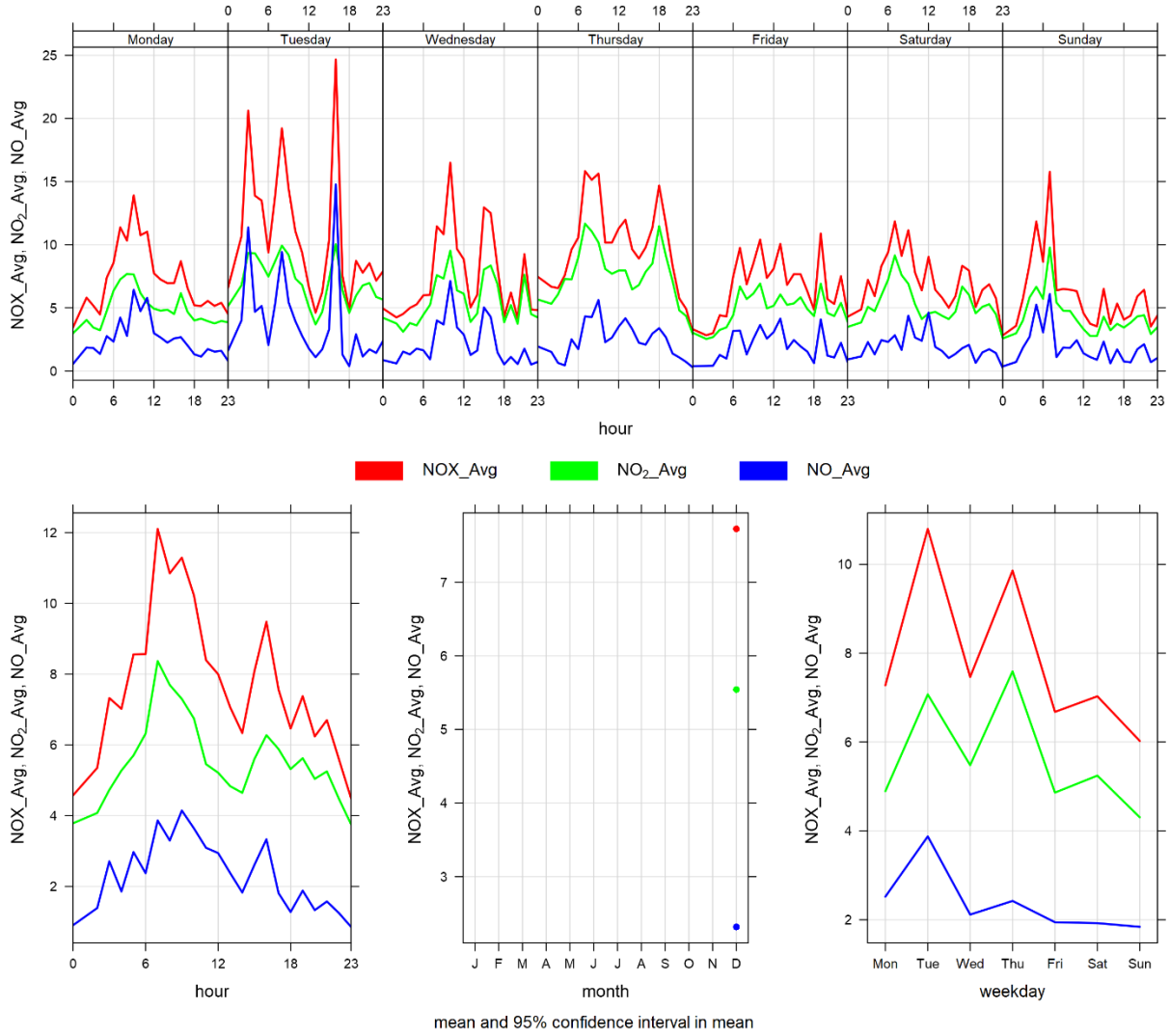


Figure 3-12 Lagoon monitor NO_x time variation

4 WINDRIDGE STATION

The Windridge station contains TSP, PM₁₀, and PM_{2.5} analyzers only. This section provides a summary of the monitoring activities for the Windridge ambient air quality station, including: a table of instrumentation (Table 4-1), a data summary table (Table 4-2), a table of recorded exceedances (Table 4-3), site visit notes, and graphs illustrating the monitoring results for December 2023.

All of the monitors comply with Alberta Environment and Parks Air Monitoring Directive (2016).

4.1 OPERATIONAL SUMMARY

A summary of the station operation for the month is provided in Table 4-1.

Table 4-1 Instrumentation List at the Windridge monitoring location

Parameter Measured	Equipment Description	Notes
PM_{2.5} Concentrations	MetOne BAM-1020 FRM Continuous Particulate Monitor	The PM _{2.5} monitor was calibrated on December 21 st . The monitor had 100% uptime for the month of December.
PM₁₀ Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The PM _{2.5} monitor was calibrated on December 21 st . The monitor had 100% uptime for the month of December.
TSP Concentrations	MetOne BAM-1020 Continuous Particulate Monitor	The TSP monitor was calibrated on December 21 st . The monitor had 100% uptime for the month of December.

4.2 MONITORING RESULTS AND TRENDS

Table 4-2 summarizes the hourly and daily concentrations recorded in December 2023, and Table 4-3 the recorded exceedances. Figure 4-1 illustrates the time series for hourly PM, Figure 4-2 to Figure 4-4 illustrates the histograms for hourly PM, Figure 4-5 illustrates the time series for daily PM, Figure 4-6 displays the wind rose for the 24-hour TSP and Figure 4-7 illustrates the time series for hourly PM over different time periods.

There were no exceedances of the 24-hour PM_{2.5} AAAQO or the 1-hour PM_{2.5} AAAQG, and 5 exceedances of the 24-hour TSP AAAQO.

Historically in December, the average number of 24-hour TSP AAAQO exceedances and 24-hour PM_{2.5} AAAQO exceedances is 8 and 0, respectively. The maximum number of 24-hour TSP AAAQO exceedances recorded in December were 16 days in 2018.

Due to flood mitigation construction at Exshaw creek the Windridge monitoring station was taken out of operation and removed from the site on April 8th, 2019. The flood mitigation work was completed in August 2020. The Windridge station was reinstalled for September 1st, 2020. As per the photo presented in section 1.1 the flood mitigation work has left an exposed creek bed area immediately west of the Windridge monitor that may contribute to an increase in TSP levels. Further, the strong wind gusting that occurred in December would have contributed to

increased particulate levels that may have arisen from multiple sources: Lafarge Plant, Exshaw Creek, dry sections of the Bow River, and open areas.

Table 4-2 Summary of December 2023 data at the Windridge Station

Parameter	Guideline		Station	Exceedances		Monthly		Maximum 1-hour				Maximum 24-hour		Operational Time (Percent)	
	1-hr	24-hr		1-hr	24-hr	Minimum	Average	Maximum Concentration	Day	Hour	Wind Speed (km/hr)	Wind Direction (degrees)	Maximum Concentration		Day
PM_{2.5} (µg/m ³)	80	29	Windridge	0	0	0.0	1.3	30.0	3	14	46.6	245.0	5.9	3	100.0
PM₁₀ (µg/m ³)	-	-	Windridge	-	-	0.0	41.7	485.0	1	20	29.3	245.5	157.6	1	100.0
TSP (µg/m ³)	-	100	Windridge	-	5	0.0	61.6	985.0	3	15	47.1	249.0	259.6	3	100.0

Table 4-3 Days exceeding the TSP AAAQO or PM_{2.5} AAAQO at the Windridge Station

Date	TSP (ug/m ³)	PM _{2.5} (ug/m ³)	Average Wind Direction (degrees)	Average Wind Speed (km/hr)	Average RH (%)	Root Cause (Provided by Lafarge)
Windridge						
2023-12-01	250.7	-	260.3	25.3	57.1	high wind event
2023-12-02	107.8	-	250.5	26.1	50.3	high wind event
2023-12-03	259.6	-	251.6	27.7	47.0	high wind event
2023-12-04	149.5	-	248.2	25.3	50.0	high wind event
2023-12-13	125.3	-	281.5	29.6	50.7	high wind event
Total # of Exceedances	5	0				
Maximum # of Exceedances (December)	16 (2018)	0 (2017, 2018, 2020, 2021, 2022)				
Average # of Exceedances (December)	8	0				
Minimum # of Exceedances (December)	3 (2022)	0 (2017, 2018, 2020, 2021, 2022)				

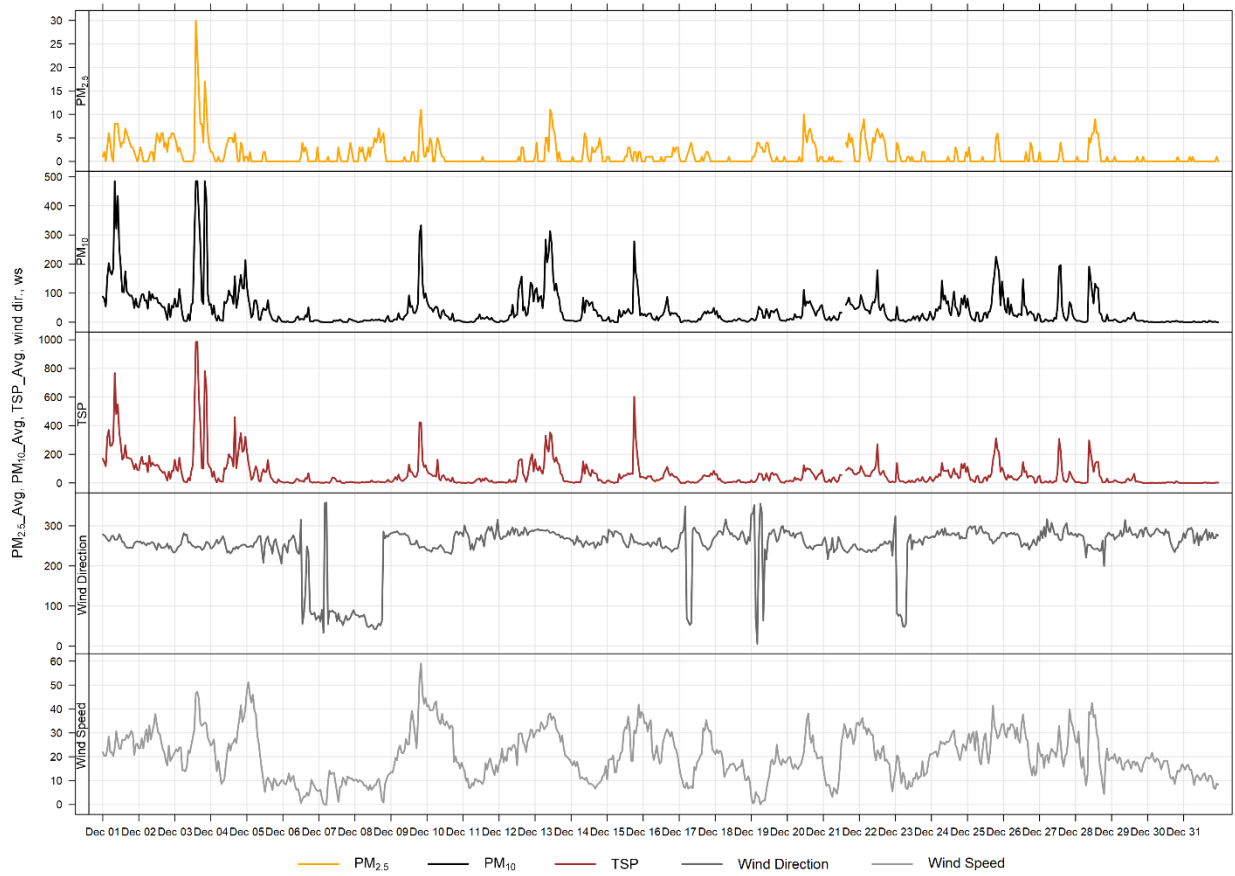


Figure 4-1 1-hour particulate matter concentrations recorded at the Windridge monitor

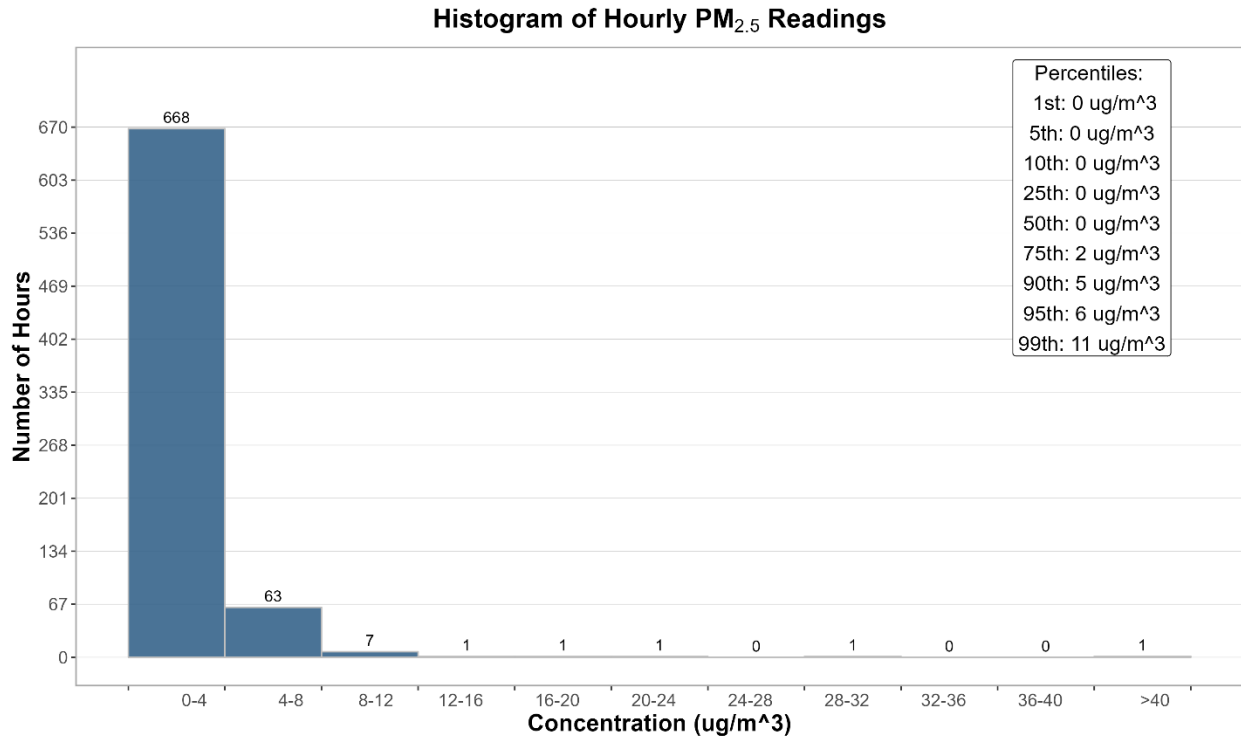


Figure 4-2 Histogram of hourly PM_{2.5} concentrations at the Windridge station

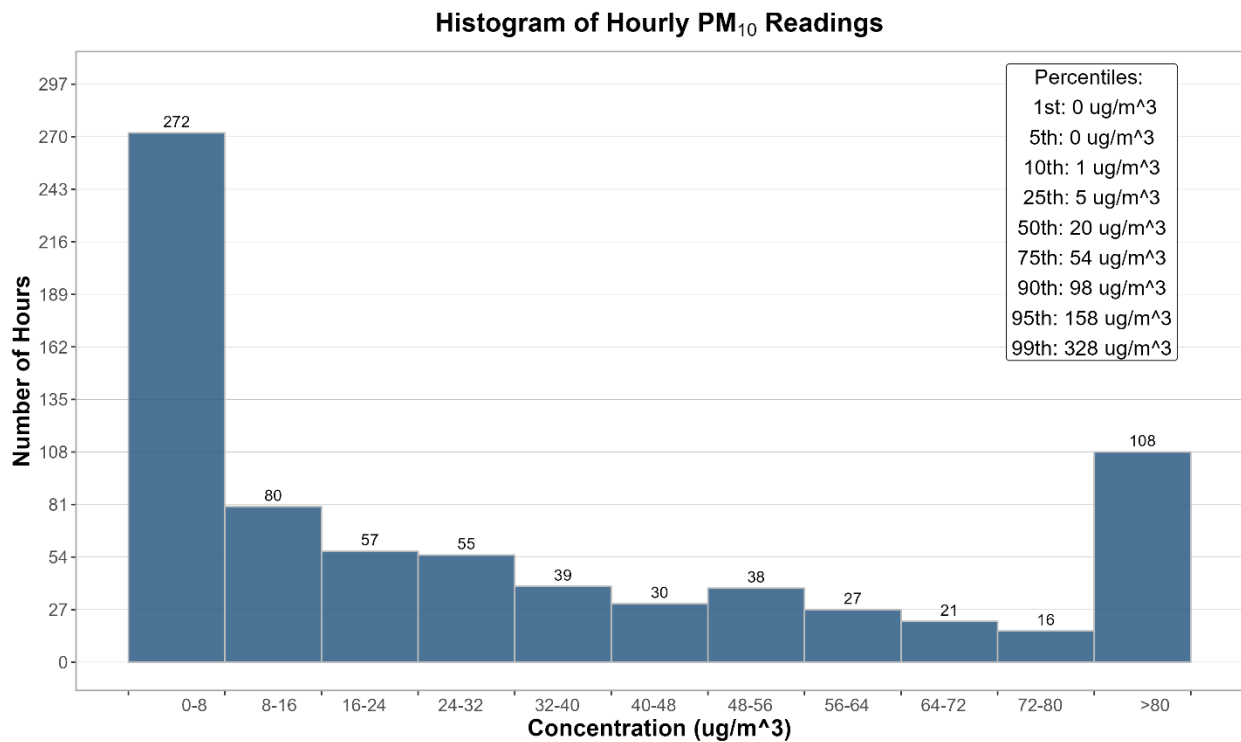


Figure 4-3 Histogram of hourly PM₁₀ concentrations at the Windridge station

Histogram of Hourly TSP Readings

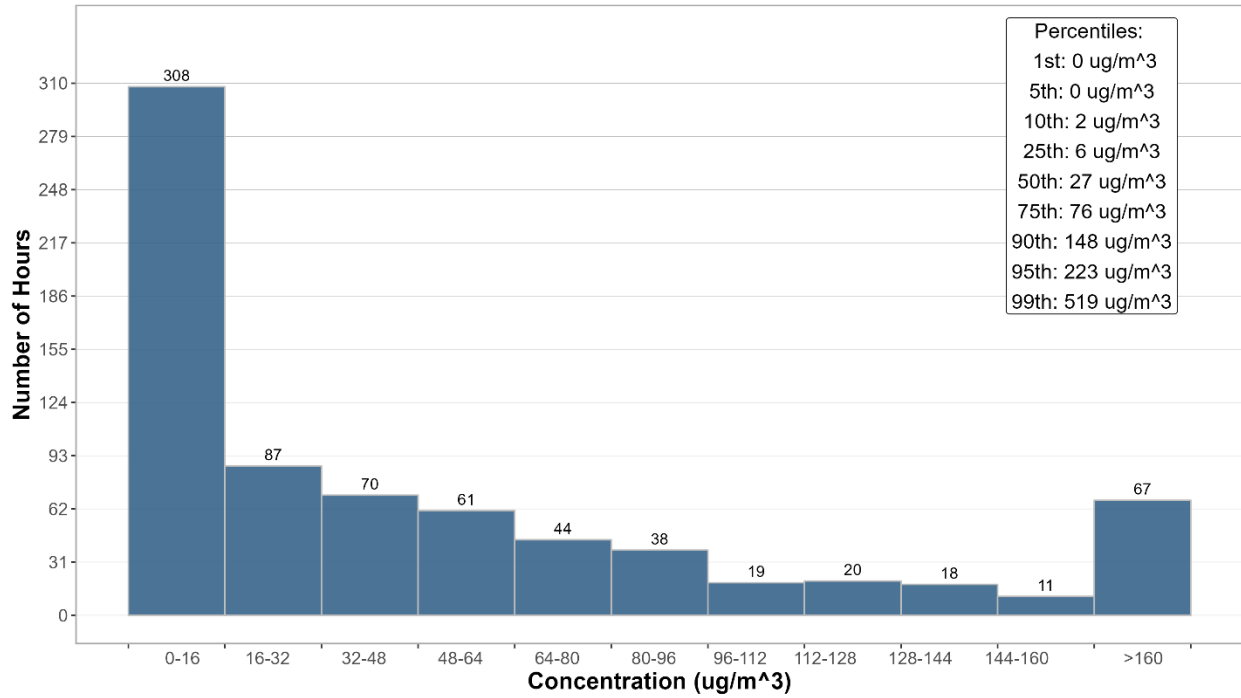


Figure 4-4 Histogram of hourly TSP concentrations at the Windridge station

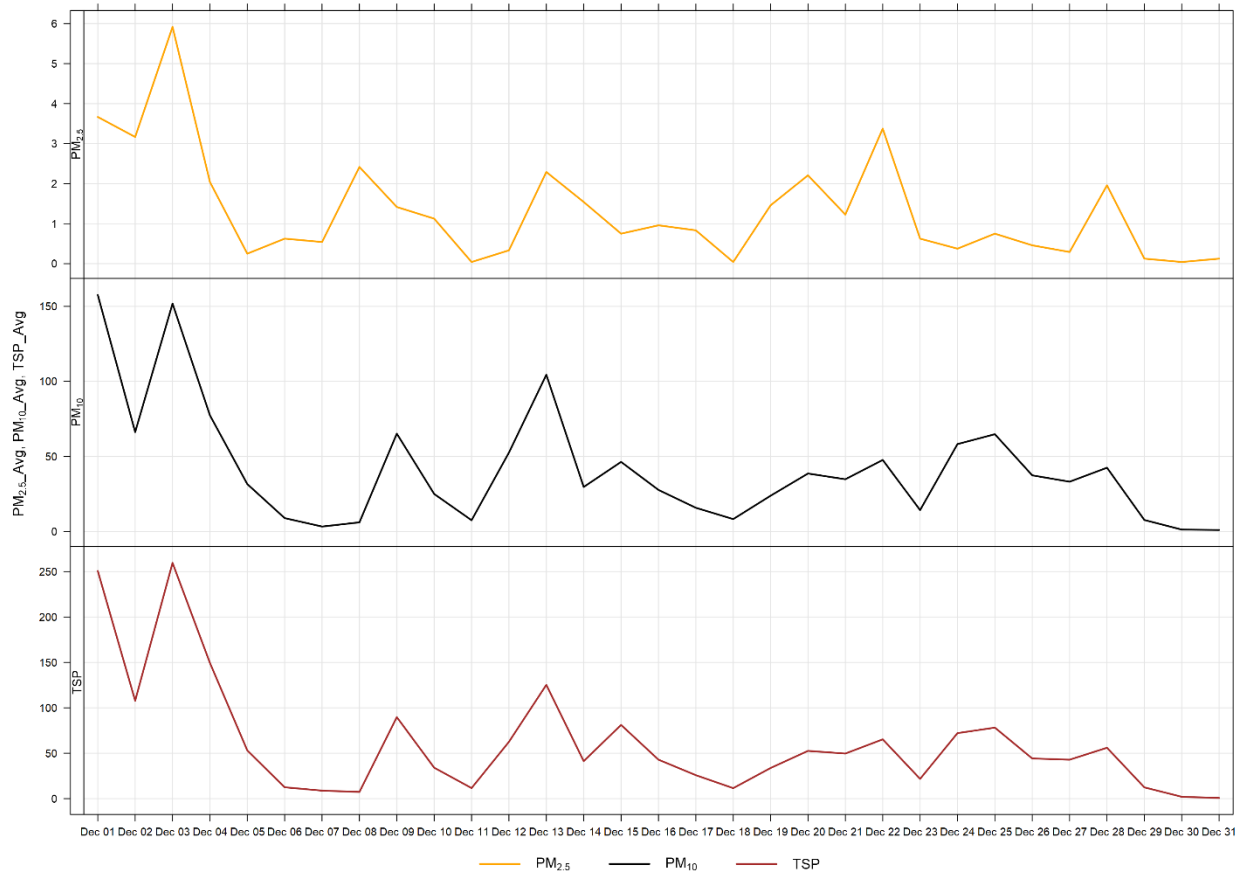


Figure 4-5 24-hour particulate matter concentrations at the Windridge monitor

Figure 4-6 shows the wind rose for the 5 days of TSP exceedance in December. The wind rose shows that the winds predominately came from the west-southwest, in high wind speed (25 km/h), suggesting impacts of windblown dust from the direction of the Lafarge Facility.

Figure 4-7 illustrates the hourly PM concentrations recorded at the Windridge monitor, averaged over different time periods. The plot across the top shows the variation of PM over the course of a week, while the bottom three plots show the changes in PM over the course of a day, month and weekday, respectively. Figure 4-7 is based on data collected during December 2023. Similar to the Lagoon station, and similar to the Lagoon station shows a more muted diurnal pattern associated with Lafarge operations, daytime emissions from traffic. The diurnal patterns also follow the diurnal pattern of higher wind speeds during the daytime hours.

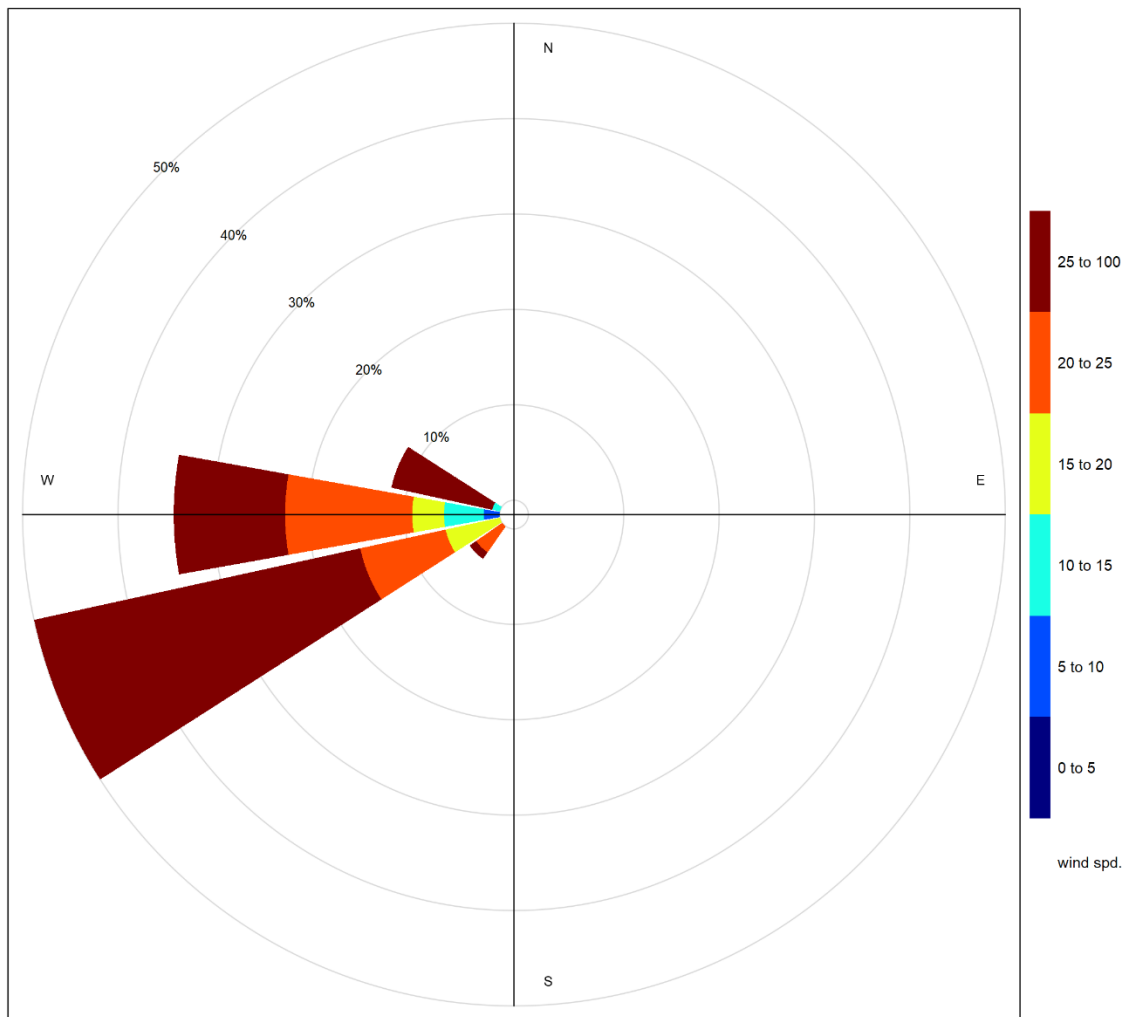


Figure 4-6 Wind rose for TSP exceedance days recorded at the Windridge Station

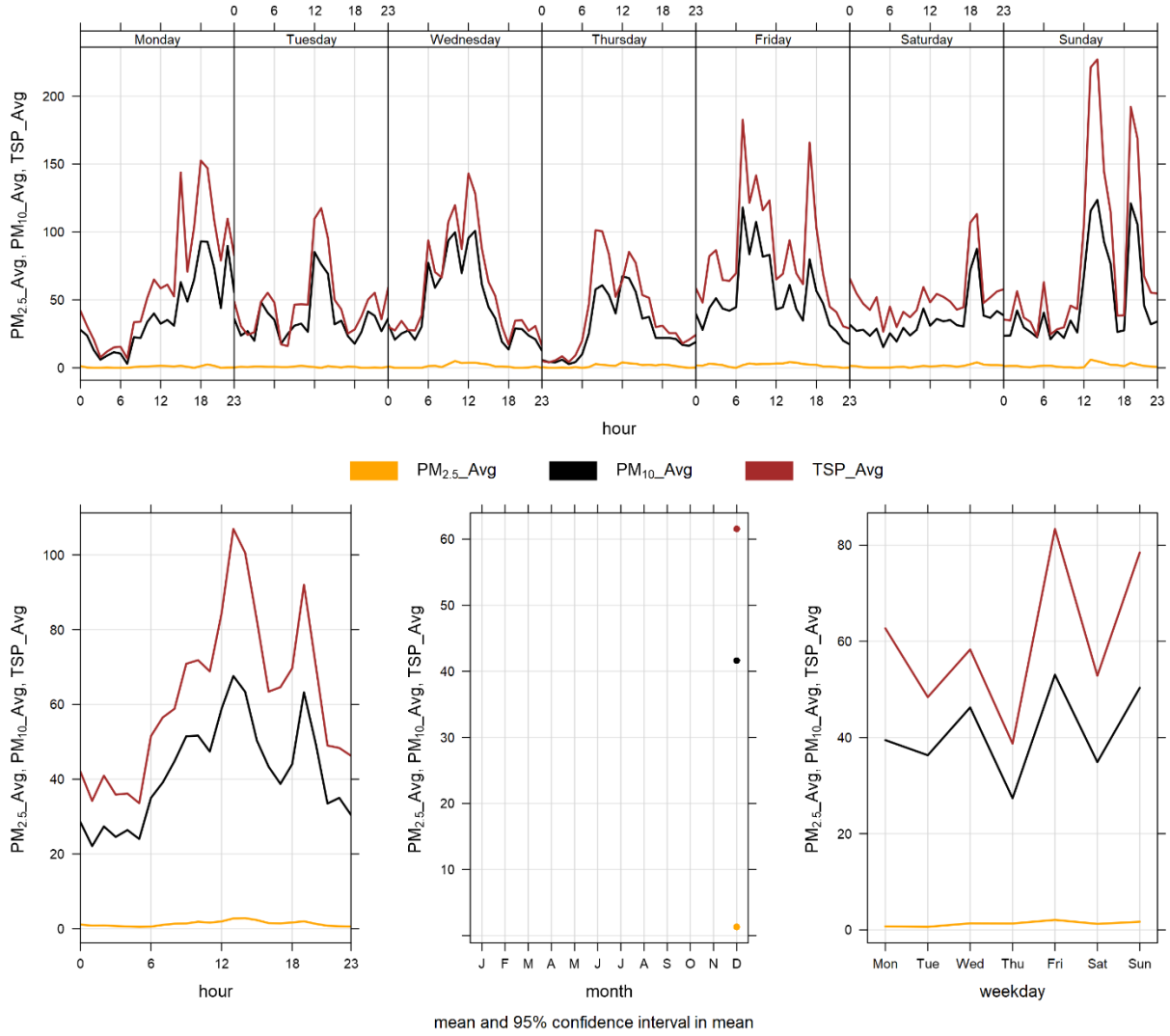


Figure 4-7 Windridge particulate matter time variation

BIBLIOGRAPHY

- Alberta Environment and Parks. (2016, June). Alberta Ambient Air Quality Objectives and Guidelines Summary. Alberta, Canada.
- Alberta Environment and Parks. (2016, April). Air Monitoring Directive. Alberta, Canada.
- Carslaw, D.C. and K. Ropkins, (2012). Openair — an R package for air quality data analysis. Environmental Modelling & Software. Volume 27–28, 52–61.
- Levelton Consultants Ltd. (2015, June 15). Comparison of GRIMM and E-BAM Data. Alberta, Can

APPENDIX

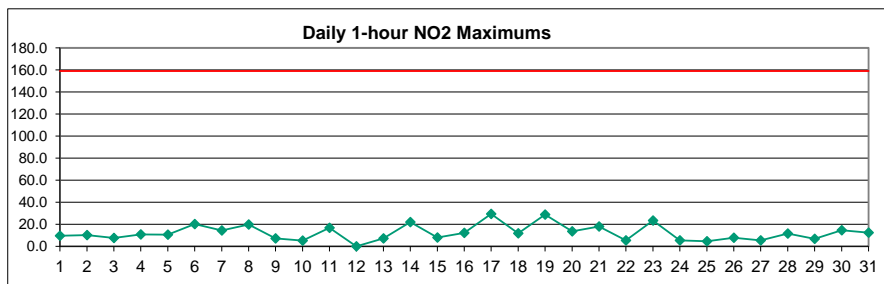
A DATA & CALIBRATION REPORTS

APPENDIX



Lagoon NO₂ (ppb) – December 2023

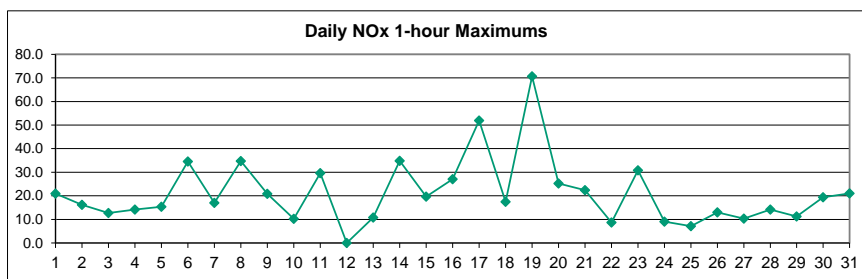
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	3.3	S	2.8	3.6	2.8	5.1	5.2	9.6	6.1	6.9	5.2	5.0	4.5	5.1	4.1	3.6	3.6	2.9	1.5	1.9	3.3	5.0	4.9	3.2	4.3	9.6
2	3.9	S	6.6	8.6	4.4	10.1	3.6	5.6	4.8	3.8	3.6	1.9	3.2	3.1	1.9	2.3	2.8	5.5	5.0	2.0	3.9	2.7	1.6	2.0	4.0	10.1
3	1.5	S	5.7	3.7	4.3	4.3	5.9	6.8	7.6	7.4	6.2	6.4	4.0	1.4	3.6	2.5	2.6	1.5	1.6	3.9	1.4	6.3	2.6	4.7	4.2	7.6
4	5.9	S	7.8	6.4	4.8	5.9	6.1	6.5	10.7	8.4	3.0	4.0	4.7	3.7	5.6	2.4	4.5	1.8	1.9	3.3	3.9	2.1	1.5	1.1	4.6	10.7
5	3.5	S	3.3	2.6	6.1	5.0	2.9	4.6	5.3	9.8	8.0	9.4	5.4	3.2	5.7	10.6	10.5	10.6	5.8	9.4	8.4	10.1	7.3	10.0	6.8	10.6
6	7.7	S	7.1	5.4	4.8	5.1	5.6	8.8	15.5	14.6	16.5	11.6	12.3	5.7	5.7	19.4	20.2	11.7	2.2	5.1	2.0	19.0	7.4	6.0	9.5	20.2
7	13.0	S	3.7	8.7	14.3	9.4	1.3	1.1	0.9	1.1	1.0	5.7	7.3	6.6	2.8	2.4	6.2	3.4	7.5	4.7	5.8	2.8	4.1	2.0	5.0	14.3
8	2.3	S	3.4	3.2	3.1	2.8	3.4	11.5	9.3	9.3	13.8	7.1	10.8	14.8	11.8	7.3	8.2	8.2	9.6	19.7	6.4	4.4	6.6	4.7	7.9	19.7
9	4.3	S	2.8	4.2	3.8	4.7	3.9	4.0	4.9	4.0	4.0	5.2	7.1	6.2	5.5	2.9	3.0	2.8	1.2	1.6	2.3	4.1	1.8	1.2	3.7	7.1
10	1.6	S	1.1	1.7	1.8	1.1	1.8	2.0	3.1	2.4	1.6	1.1	1.0	1.1	1.1	1.1	1.4	4.1	4.2	2.9	2.9	5.2	2.5	2.5	2.1	5.2
11	2.4	S	4.7	3.0	4.1	7.0	15.1	16.8	13.0	13.8	13.1	9.6	6.1	6.4	5.1	4.2	3.8	3.8	2.7	2.8	2.4	2.1	5.9	2.8	6.6	16.8
12	2.9	S	3.1	2.4	1.9	2.0	3.7	4.2	5.8	6.1	4.3	C	C	C	C	C	C	4.0	4.4	4.1	5.8	5.7	4.3	3.0	-	-
13	2.8	S	2.0	2.0	3.6	3.2	2.8	3.1	4.1	3.9	3.7	3.1	3.0	3.6	3.4	3.5	7.1	4.1	4.5	5.3	5.2	3.9	3.6	3.5	3.7	7.1
14	3.9	S	2.5	2.8	2.8	3.1	10.6	21.5	21.9	19.7	19.1	16.8	18.2	20.9	18.9	19.9	21.6	20.9	20.6	18.3	10.8	6.5	6.6	5.0	13.6	21.9
15	4.0	S	2.9	3.2	6.7	4.0	8.0	6.3	5.0	6.5	6.9	3.7	2.3	2.0	2.8	6.6	7.1	3.7	4.0	3.9	2.7	3.8	6.2	4.4	4.6	8.0
16	3.6	S	2.7	5.7	3.5	6.5	6.5	8.4	7.0	12.1	5.6	4.2	2.1	2.3	3.4	4.7	2.9	3.3	1.9	2.4	3.1	5.7	6.6	2.6	4.7	12.1
17	2.7	S	2.1	7.6	17.6	20.0	12.4	29.4	7.5	3.7	5.0	3.9	3.6	3.3	3.5	3.5	3.6	2.8	2.1	2.5	4.7	2.9	2.5	2.9	6.5	29.4
18	1.9	S	2.1	2.9	2.5	4.8	2.9	4.4	5.4	6.8	7.3	6.8	7.2	6.2	6.8	9.5	11.7	9.4	8.6	7.7	7.1	8.5	6.7	9.8	6.4	11.7
19	10.8	S	18.0	28.8	27.1	24.0	21.1	22.1	22.9	18.5	11.8	8.6	7.9	5.9	4.9	6.5	17.1	7.7	4.5	4.8	5.3	5.6	6.4	4.4	12.8	28.8
20	3.2	S	2.9	2.3	3.5	3.8	5.6	5.9	6.6	6.7	13.5	5.7	5.3	2.7	5.6	4.0	1.2	6.3	4.0	6.0	3.7	4.5	2.9	4.7	4.8	13.5
21	3.3	S	11.0	8.6	7.6	11.1	18.1	16.6	15.6	12.7	8.9	5.5	4.3	1.6	1.1	1.5	0.9	1.6	6.1	5.8	4.7	2.4	0.8	1.2	6.6	18.1
22	1.1	S	0.9	0.7	0.6	0.8	0.7	1.5	3.2	3.5	4.5	5.1	4.5	4.5	3.3	5.0	5.3	3.0	1.6	3.9	4.7	4.0	4.0	2.6	3.0	5.3
23	1.0	S	0.7	2.1	7.8	5.2	16.1	23.3	16.1	8.1	5.3	3.9	6.5	7.9	5.0	3.3	8.3	13.7	7.4	4.8	4.8	4.8	4.3	2.9	7.1	23.3
24	2.3	S	2.1	2.1	2.1	3.5	5.1	5.3	4.6	5.4	5.2	2.6	2.1	1.8	1.5	2.1	1.7	3.3	2.4	2.9	2.7	2.6	2.9	2.0	3.0	5.4
25	1.7	S	1.6	1.4	1.4	1.3	1.3	1.4	1.6	1.5	1.3	1.2	1.8	2.8	2.0	2.0	4.6	3.6	2.8	2.8	2.4	2.3	1.8	1.7	2.0	4.6
26	3.3	S	2.7	3.6	2.2	2.9	2.2	4.0	5.8	2.3	5.1	2.5	1.9	2.0	3.5	4.7	2.6	3.3	3.9	5.5	7.7	6.5	5.5	5.2	3.9	7.7
27	3.1	S	3.0	2.6	3.2	2.4	3.8	3.1	4.2	4.0	4.4	5.1	3.9	3.6	3.5	5.3	4.9	5.5	4.7	4.6	4.1	3.1	4.1	2.7	3.9	5.5
28	2.5	S	4.2	4.2	4.4	5.4	6.0	7.4	5.8	7.3	3.4	2.8	2.0	2.7	3.0	3.5	2.7	8.1	11.7	7.7	7.1	7.5	5.9	3.5	5.2	11.7
29	4.4	S	2.7	2.7	3.1	4.5	4.9	4.5	4.9	4.5	4.3	3.9	3.7	3.9	4.3	4.4	5.0	6.8	5.0	5.1	5.8	4.5	5.3	4.6	4.5	6.8
30	4.5	S	6.4	4.8	4.2	3.4	6.0	4.4	5.2	6.6	8.0	5.4	3.9	3.9	6.0	7.3	6.5	8.1	14.7	12.0	11.3	9.1	8.1	4.5	6.7	14.7
31	4.8	S	3.9	4.9	3.4	4.5	3.4	5.3	4.3	5.1	5.8	6.0	5.8	6.2	4.2	12.4	7.0	6.9	6.8	6.9	9.8	5.1	4.1	5.3	5.7	12.4
NO.	31	-	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30	31	31	31	31	31	31	31	707	100.0%
MEAN	3.8	-	4.1	4.7	5.3	5.7	6.3	8.4	7.7	7.3	6.7	5.5	5.2	4.8	4.6	5.6	6.3	5.9	5.3	5.6	5.0	5.3	4.5	3.8		
MAX	13.0	-	18.0	28.8	27.1	24.0	21.1	29.4	22.9	19.7	19.1	16.8	18.2	20.9	18.9	19.9	21.6	20.9	20.6	19.7	11.3	19.0	8.1	10.0		



Number of 1HR Exceedences	0
Number of Non-Zero Readings	707
Maximum 1-HR Average	29.4 PPB
Maximum 24-HR Average	13.6 PPB
Monthly Calibration	6
Standard Deviation	4.4
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	5.5 PPB

Lagoon NOx (ppb) – December 2023

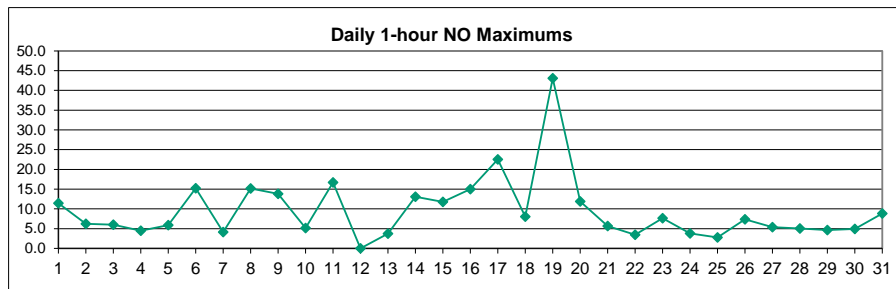
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	3.4	S	3.9	4.8	2.9	8.4	6.8	20.9	7.8	12.7	7.4	7.2	6.5	7.7	5.4	4.4	4.5	4.0	1.6	2.1	4.2	8.5	7.9	4.3	6.4	20.9
2	5.2	S	9.6	13.9	5.9	16.2	4.3	9.1	5.8	5.0	5.6	2.6	4.7	4.4	2.4	2.6	3.2	7.4	5.4	2.1	4.3	3.0	1.6	2.1	5.5	16.2
3	1.6	S	8.1	4.2	5.2	6.4	11.5	12.7	10.1	10.4	7.8	11.7	5.4	1.8	5.5	3.0	2.9	1.6	1.8	5.0	1.7	10.5	3.6	6.8	6.1	12.7
4	7.6	S	11.4	10.8	5.2	7.1	9.4	9.4	14.2	12.5	4.2	5.6	6.7	5.9	8.7	3.1	5.3	2.1	2.1	5.0	6.4	2.4	1.5	1.2	6.4	14.2
5	5.0	S	5.0	3.2	11.9	7.8	3.3	9.8	6.0	13.1	10.5	11.8	6.4	3.7	7.2	13.6	11.2	10.9	5.9	14.3	8.6	12.4	7.4	15.4	8.9	15.4
6	8.2	S	8.3	9.9	5.5	9.3	7.9	10.3	26.3	24.3	29.6	15.7	15.8	7.0	6.9	34.5	32.0	14.4	2.3	5.4	2.2	24.4	7.5	6.6	13.7	34.5
7	17.0	S	3.6	8.8	15.3	11.9	1.4	1.1	1.0	1.2	1.1	7.4	9.7	9.0	3.5	2.8	7.0	3.8	8.9	5.1	7.4	3.1	4.5	2.0	5.9	17.0
8	2.5	S	3.5	3.4	3.3	2.9	3.6	13.1	10.9	11.4	21.6	10.4	20.1	29.4	15.7	8.7	9.7	8.4	10.5	34.8	6.7	4.5	8.6	4.8	10.8	34.8
9	6.1	S	2.9	5.8	5.4	6.4	4.2	4.3	8.4	4.6	6.6	10.4	20.9	9.1	8.7	3.5	3.3	3.1	1.5	2.0	3.2	6.9	2.0	1.4	5.7	20.9
10	1.6	S	1.2	2.0	2.2	1.3	2.3	2.4	4.0	3.1	2.2	1.4	1.1	1.3	1.4	1.2	1.6	6.0	5.7	2.9	3.3	10.2	2.6	2.5	2.8	10.2
11	2.4	S	6.7	3.1	8.2	10.3	20.7	29.6	18.5	29.6	26.7	26.2	11.8	10.5	7.6	5.1	4.8	6.0	2.8	2.9	2.4	2.3	10.6	3.6	11.0	29.6
12	5.0	S	4.6	2.9	2.0	2.1	5.0	6.3	11.1	8.3	5.6	C	C	C	C	C	C	4.1	5.0	6.2	6.7	7.3	5.7	4.2	-	-
13	3.9	S	1.9	1.9	4.8	5.1	3.1	3.5	5.8	5.5	5.8	4.1	4.0	4.6	4.0	3.9	10.7	4.2	5.6	6.7	6.2	4.6	3.5	4.2	4.7	10.7
14	6.0	S	3.2	3.1	2.7	3.1	12.3	34.3	34.9	32.6	24.8	22.7	26.9	33.3	30.2	26.9	28.4	26.8	26.2	22.6	11.0	7.5	7.1	5.4	18.8	34.9
15	4.2	S	3.0	3.3	10.8	4.1	19.7	8.0	5.7	9.5	12.3	5.5	3.2	2.7	3.6	13.4	9.9	4.1	4.4	5.5	3.0	4.6	9.1	5.1	6.7	19.7
16	4.0	S	2.9	8.0	4.6	8.7	7.7	10.5	8.8	27.0	7.9	5.7	2.7	2.7	4.4	6.3	3.5	4.0	1.9	2.6	3.4	7.9	9.1	2.7	6.4	27.0
17	3.2	S	2.0	11.7	28.9	39.6	18.8	52.0	8.3	3.9	7.8	6.4	5.0	4.0	4.1	4.5	4.1	2.9	2.3	2.7	6.1	3.0	3.3	3.6	9.9	52.0
18	2.1	S	3.5	5.5	3.1	10.9	2.9	5.2	7.1	12.1	10.8	11.0	9.5	7.7	9.3	17.4	17.5	13.6	12.8	8.3	8.6	13.0	7.3	9.8	9.1	17.5
19	11.7	S	27.9	70.6	39.4	39.5	27.3	34.0	46.8	33.9	19.9	13.2	11.4	7.9	6.9	11.0	60.1	11.6	4.6	6.0	6.0	7.0	9.3	4.4	22.2	70.6
20	3.2	S	3.4	3.0	5.8	4.4	7.4	7.1	8.5	8.3	25.2	8.5	10.0	3.8	7.8	5.5	1.4	8.2	4.4	7.4	3.8	5.0	3.2	5.8	6.6	25.2
21	4.4	S	11.8	8.7	7.7	16.6	22.4	18.5	17.3	17.6	10.4	6.9	6.0	2.2	1.4	1.9	0.9	1.8	9.5	8.5	7.4	2.7	0.9	1.3	8.1	22.4
22	1.3	S	0.9	0.7	0.5	0.7	0.6	2.0	4.1	3.9	5.3	6.6	5.4	5.3	3.8	6.3	8.6	4.0	1.6	6.1	6.7	4.4	6.3	3.5	3.8	8.6
23	1.0	S	0.7	2.3	9.4	6.7	21.4	30.8	16.9	8.9	7.1	5.9	12.0	11.3	6.3	3.8	12.5	17.8	11.6	5.8	8.0	6.4	6.7	2.9	9.4	30.8
24	2.2	S	2.1	3.4	2.2	5.6	7.1	5.9	4.7	9.0	6.7	3.5	2.8	2.3	1.7	2.8	1.6	5.7	2.5	3.4	2.7	2.6	3.2	2.1	3.7	9.0
25	1.8	S	1.6	1.4	1.4	1.3	1.3	1.3	1.5	1.5	1.3	1.4	3.0	4.9	2.2	2.3	7.2	4.6	3.1	4.4	4.8	2.9	2.2	3.4	2.6	7.2
26	4.7	S	5.2	5.7	2.3	4.6	2.0	5.4	13.0	2.6	8.3	3.1	2.2	2.3	4.7	6.4	2.7	3.5	3.9	8.4	9.9	7.4	6.2	7.5	5.3	13.0
27	4.6	S	3.4	3.2	3.9	2.3	5.7	3.2	5.3	5.2	5.4	10.3	5.6	4.8	5.3	7.8	5.9	6.2	4.7	5.4	4.5	3.0	5.3	2.6	4.9	10.3
28	2.5	S	8.1	5.7	4.7	6.9	6.3	9.4	7.4	11.2	4.4	3.7	2.4	3.4	3.6	4.0	2.7	13.0	14.1	10.5	7.5	9.7	7.3	3.7	6.6	14.1
29	5.2	S	2.8	2.8	4.6	5.6	6.7	4.7	5.8	5.2	5.4	7.1	5.2	5.3	5.7	5.5	5.6	11.2	6.2	5.9	7.9	4.6	5.7	4.6	5.6	11.2
30	5.2	S	8.3	6.2	4.3	3.6	9.3	4.6	5.6	10.1	11.7	7.3	4.9	4.6	7.2	8.8	7.2	9.3	19.4	12.9	13.2	10.1	9.5	4.7	8.2	19.4
31	5.4	S	4.6	7.2	3.7	6.3	3.5	5.9	4.9	6.1	7.6	8.6	8.5	9.4	4.9	21.0	8.4	10.5	8.1	8.0	15.8	5.7	4.9	7.2	7.7	21.0
NO.	31	-	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30	31	31	31	31	31	31	31	707	100.0%
MEAN	4.6	-	5.4	7.3	7.0	8.6	8.6	12.1	10.9	11.3	10.2	8.4	8.0	7.1	6.3	8.1	9.5	7.6	6.5	7.4	6.2	6.7	5.6	4.5		
MAX	17.0	-	27.9	70.6	39.4	39.6	27.3	52.0	46.8	33.9	29.6	26.2	26.9	33.3	30.2	34.5	60.1	26.8	26.2	34.8	15.8	24.4	10.6	15.4		



Number of Non-Zero Readings	707	Operational Time	744 HRS
Maximum 1-HR Average	70.6 PPB	Operational Uptime	100.0 %
Maximum 24-HR Average	22.2 PPB	Monthly Average	7.7 PPB
Monthly Calibration	6		
Standard Deviation	7.593		

Lagoon NO (ppb) – December 2023

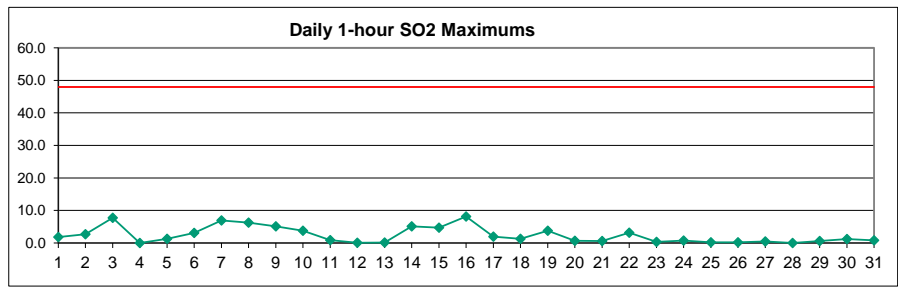
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	0.2	S	1.2	1.4	0.2	3.4	1.7	11.4	2.0	5.9	2.4	2.5	2.2	2.8	1.5	1.0	1.0	1.2	0.2	0.4	0.9	3.6	3.1	1.2	2.2	11.4
2	1.4	S	3.1	5.5	1.6	6.2	0.8	3.6	1.1	1.4	2.2	0.8	1.6	1.4	0.5	0.4	0.5	2.0	0.6	0.2	0.5	0.4	0.1	0.2	1.6	6.2
3	0.2	S	2.4	0.6	1.0	2.2	5.8	6.0	2.6	3.2	1.9	5.4	1.5	0.5	2.1	0.7	0.5	0.2	0.4	1.2	0.3	4.3	1.0	2.2	2.0	6.0
4	1.8	S	3.7	4.4	0.5	1.4	3.4	3.0	3.7	4.3	1.3	1.7	2.1	2.3	3.2	0.8	0.9	0.3	0.3	1.8	2.6	0.4	0.2	0.2	1.9	4.4
5	1.6	S	1.8	0.7	5.9	2.9	0.4	5.3	0.9	3.5	2.7	2.7	1.2	0.6	1.7	3.2	0.9	0.5	0.3	5.1	0.4	2.5	0.3	5.7	2.2	5.9
6	0.7	S	1.3	4.6	0.8	4.3	2.4	1.7	10.9	9.9	13.3	4.3	3.7	1.4	1.4	15.2	12.0	2.8	0.2	0.4	0.3	5.5	0.3	0.7	4.3	15.2
7	4.1	S	0.0	0.2	1.1	2.6	0.1	0.0	0.2	0.2	0.2	1.8	2.7	2.6	0.8	0.6	1.0	0.4	1.6	0.5	1.7	0.4	0.5	0.1	1.0	4.1
8	0.2	S	0.2	0.3	0.3	0.2	0.4	1.8	1.7	2.3	8.0	3.5	9.5	14.8	4.1	1.6	1.7	0.3	1.0	15.1	0.3	0.2	2.1	0.2	3.0	15.1
9	1.8	S	0.1	1.7	1.7	1.7	0.4	0.4	3.6	0.7	2.7	5.3	13.8	3.0	3.3	0.7	0.4	0.4	0.4	0.5	1.0	2.9	0.4	0.3	2.1	13.8
10	0.2	S	0.2	0.4	0.6	0.3	0.6	0.5	1.0	0.8	0.8	0.4	0.2	0.3	0.4	0.2	0.3	1.9	1.5	0.0	0.5	5.2	0.2	0.1	0.7	5.2
11	0.1	S	2.1	0.1	4.1	3.4	5.8	12.9	5.6	15.9	13.8	16.7	6.0	4.3	2.7	1.0	1.1	2.2	0.2	0.2	0.0	0.3	4.8	0.8	4.5	16.7
12	2.2	S	1.5	0.6	0.1	0.2	1.4	2.3	5.5	2.3	1.4	C	C	C	C	C	C	0.3	0.7	2.2	1.0	1.7	1.4	1.2	-	-
13	1.1	S	0.0	0.0	1.3	2.0	0.3	0.5	1.8	1.7	2.2	1.0	1.1	1.1	0.7	0.5	3.7	0.1	1.2	1.5	1.1	0.8	0.0	0.8	1.1	3.7
14	2.2	S	0.9	0.4	0.0	0.1	1.8	13.0	13.1	13.1	6.0	6.1	9.0	12.6	11.5	7.3	7.1	6.0	5.7	4.4	0.4	1.1	0.7	0.5	5.3	13.1
15	0.3	S	0.2	0.1	4.2	0.1	11.8	1.8	0.8	3.2	5.6	1.8	1.0	0.8	0.9	6.9	2.9	0.5	0.6	1.7	0.4	0.9	3.0	0.9	2.2	11.8
16	0.5	S	0.3	2.4	1.1	2.3	1.3	2.2	2.0	15.0	2.4	1.6	0.7	0.5	1.2	1.8	0.7	0.9	0.1	0.3	0.4	2.3	2.6	0.2	1.9	15.0
17	0.6	S	0.0	4.2	11.4	19.7	6.5	22.5	0.9	0.4	2.9	2.5	1.4	0.8	0.7	1.1	0.6	0.2	0.3	0.3	1.5	0.2	0.9	0.7	3.5	22.5
18	0.2	S	1.5	2.6	0.6	6.2	0.0	0.9	1.8	5.4	3.6	4.4	2.5	1.6	2.6	8.0	5.9	4.4	4.3	0.8	1.7	4.6	0.8	0.3	2.8	8.0
19	1.1	S	10.0	41.8	12.4	15.6	6.4	12.2	24.0	15.5	8.2	4.9	3.7	2.2	2.1	4.6	43.1	4.0	0.3	1.3	0.8	1.6	3.0	0.2	9.5	43.1
20	0.0	S	0.6	0.8	2.4	0.7	1.9	1.3	2.1	1.8	11.9	3.0	4.8	1.2	2.4	1.6	0.2	2.1	0.5	1.5	0.2	0.6	0.3	1.3	1.9	11.9
21	1.2	S	1.0	0.3	0.2	5.7	4.5	2.1	2.0	5.1	1.8	1.6	1.9	0.7	0.3	0.5	0.1	0.3	3.6	2.8	2.7	0.5	0.2	0.3	1.7	5.7
22	0.3	S	0.2	0.1	0.0	0.0	0.1	0.7	1.0	0.5	0.9	1.7	1.0	0.9	0.6	1.5	3.5	1.1	0.1	2.3	2.1	0.4	2.4	1.0	1.0	3.5
23	0.0	S	0.1	0.3	1.8	1.7	5.5	7.6	1.0	1.1	1.9	2.2	5.7	3.6	1.4	0.6	4.3	4.3	4.3	1.1	3.3	1.8	2.4	0.1	2.4	7.6
24	0.0	S	0.0	1.4	0.2	2.2	2.2	0.7	0.2	3.8	1.7	1.1	0.9	0.6	0.4	0.8	0.1	2.5	0.2	0.6	0.1	0.1	0.4	0.2	0.9	3.8
25	0.2	S	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.2	0.4	1.4	2.4	0.5	0.5	2.8	1.2	0.5	1.8	2.7	0.8	0.6	1.9	0.8	2.8
26	1.6	S	2.6	2.3	0.4	1.8	0.0	1.6	7.4	0.4	3.4	0.8	0.5	0.5	1.4	2.0	0.3	0.3	0.2	3.1	2.4	1.1	0.9	2.5	1.6	7.4
27	1.6	S	0.5	0.7	0.8	0.1	2.0	0.2	1.2	1.4	1.2	5.4	1.9	1.3	2.0	2.8	1.2	0.9	0.2	1.0	0.6	0.1	1.4	0.1	1.2	5.4
28	0.2	S	4.2	1.7	0.4	1.7	0.5	2.2	1.8	4.1	1.3	1.1	0.6	0.8	0.7	0.6	0.2	5.1	2.7	2.9	0.6	2.3	1.6	0.3	1.6	5.1
29	0.9	S	0.2	0.2	1.7	1.3	2.0	0.3	1.1	0.9	1.3	3.3	1.6	1.5	1.6	1.3	0.7	4.7	1.3	0.9	2.3	0.3	0.6	0.2	1.3	4.7
30	0.9	S	2.1	1.6	0.3	0.3	3.5	0.4	0.7	3.7	4.0	2.1	1.2	0.9	1.4	1.7	0.9	1.4	4.9	1.1	2.2	1.3	1.6	0.4	1.7	4.9
31	0.8	S	0.9	2.5	0.4	2.0	0.2	0.7	0.7	1.1	1.9	2.8	2.9	3.4	0.9	8.8	1.6	3.7	1.4	1.3	6.3	0.8	1.0	2.1	2.1	8.8
NO.	31	-	31	31	31	31	31	31	31	31	31	30	30	30	30	30	30	31	31	31	31	31	31	31	707	100.0%
MEAN	0.9	-	1.4	2.7	1.9	3.0	2.4	3.9	3.3	4.1	3.6	3.1	2.9	2.4	1.8	2.6	3.3	1.8	1.3	1.9	1.3	1.6	1.3	0.9		
MAX	4.1	-	10.0	41.8	12.4	19.7	11.8	22.5	24.0	15.9	13.8	16.7	13.8	14.8	11.5	15.2	43.1	6.0	5.7	15.1	6.3	5.5	4.8	5.7		



Number of Non-Zero Readings	701		
Maximum 1-HR Average	43.1 PPB		
Maximum 24-HR Average	9.5 PPB		
Monthly Calibration	6	Operational Time	744 HRS
Standard Deviation	3.735	Operational Uptime	100.0 %
		Monthly Average	2.3 PPB

Lagoon SO₂ (ppb) – December 2023

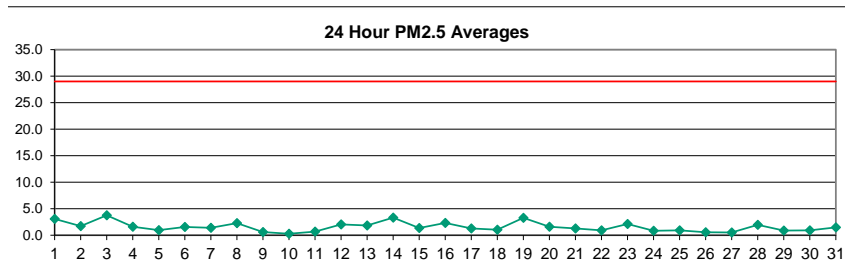
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	0.2	S	0.1	0.6	1.1	1.2	1.1	0.5	1.8	1.1	0.4	0.9	0.8	0.4	1.2	1.6	0.3	0.4	0.3	0.2	0.5	0.7	0.8	0.4	0.7	1.8
2	0.5	S	0.3	1.1	0.7	0.9	0.5	0.9	1.1	2.3	2.7	0.7	0.6	0.3	1.8	0.9	1.1	1.5	0.8	0.5	1.2	0.8	0.4	0.4	1.0	2.7
3	0.6	S	0.7	0.8	1.4	2.7	2.2	1.5	7.8	2.1	4.0	2.3	0.5	0.3	1.5	2.3	0.7	0.6	0.5	0.0	0.3	0.4	0.4	1.7	1.5	7.8
4	0.6	S	0.4	0.5	0.5	0.5	1.0	1.3	1.2	0.6	C	C	C	C	C	C	C	0.0	0.0	0.0	0.1	0.1	0.0	0.0	-	-
5	0.0	S	0.2	0.3	0.6	1.3	0.6	0.0	0.1	0.0	0.0	0.2	0.4	0.1	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.2	1.3
6	0.5	S	0.4	0.6	0.9	0.0	0.0	0.0	0.1	1.3	2.2	1.3	0.1	0.0	0.0	0.0	0.1	0.5	0.7	3.1	3.0	2.7	2.1	0.2	0.9	3.1
7	0.1	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.4	1.2	0.1	0.0	0.0	0.0	0.2	0.3	1.2	1.4	5.1	6.9	4.4	0.9	6.9
8	2.8	S	0.7	0.3	0.0	0.7	0.1	0.1	0.2	0.5	0.3	6.3	1.3	0.2	0.0	1.6	0.5	0.1	0.2	0.9	5.6	1.0	0.3	0.6	1.0	6.3
9	1.3	S	1.6	3.9	3.4	1.9	2.7	1.3	1.6	3.5	5.1	4.4	0.3	0.7	0.2	0.3	0.2	0.2	0.5	0.5	0.4	0.6	2.7	2.7	1.7	5.1
10	1.6	S	0.7	1.0	1.1	1.4	0.6	0.6	0.4	0.4	0.5	0.3	0.3	0.9	1.1	2.7	1.2	3.8	0.7	0.5	0.4	0.3	0.8	1.0	1.0	3.8
11	0.5	S	0.3	0.4	0.4	0.4	0.6	0.8	0.6	0.8	0.4	0.5	0.3	0.2	0.2	0.1	0.3	0.3	0.3	0.1	0.1	0.1	0.1	0.0	0.3	0.8
12	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1
14	0.4	S	0.1	0.8	0.1	0.0	0.0	0.5	3.3	5.1	4.1	3.1	0.4	0.1	0.0	0.3	0.1	0.0	0.0	0.2	1.7	2.0	1.0	0.2	1.0	5.1
15	0.2	S	0.5	0.7	1.6	4.4	1.3	0.4	1.3	1.8	0.4	0.1	0.5	0.0	0.0	0.4	0.0	0.0	0.7	0.3	4.3	4.7	1.9	0.9	1.2	4.7
16	0.5	S	2.7	7.2	8.1	2.2	0.2	0.3	0.6	5.0	2.3	0.9	1.1	3.9	3.1	2.8	3.6	1.8	1.5	0.6	0.3	0.0	0.2	0.4	2.1	8.1
17	0.4	S	2.0	0.2	0.1	0.2	0.2	0.1	0.1	0.0	0.0	0.2	0.5	0.1	0.1	0.1	0.2	0.4	0.2	0.0	0.1	0.0	0.1	0.3	0.2	2.0
18	0.2	S	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.4	0.3	0.8	0.3	0.4	1.3	0.2	1.3
19	0.3	S	0.3	0.7	1.5	1.4	1.4	2.0	2.6	3.8	1.1	1.6	1.0	0.7	0.2	0.1	0.1	0.2	0.1	0.3	0.9	0.9	0.4	0.2	1.0	3.8
20	0.1	S	0.1	0.7	0.7	0.5	0.3	0.2	0.3	0.2	0.3	0.5	0.0	0.0	0.2	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.7
21	0.0	S	0.0	0.1	0.0	0.1	0.2	0.1	0.1	0.2	0.1	0.0	0.3	0.3	0.4	0.6	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.1	0.2	0.6
22	0.0	S	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.4	3.2	3.1	2.9	1.9	0.6	0.3	0.2	0.2	0.4	0.3	0.2	0.1	0.0	0.7	3.2
23	0.0	S	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.2	0.3	0.3	0.1	0.2	0.1	0.2	0.2	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.1	0.3
24	0.0	S	0.0	0.0	0.2	0.2	0.3	0.3	0.8	0.7	0.5	0.4	0.3	0.3	0.1	0.5	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8
25	0.0	S	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.0	0.1	0.2	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2
26	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
27	0.0	S	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.1	0.5
28	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.5	0.1	0.6
30	0.1	S	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.6	0.7	0.3	1.2	0.4	0.1	0.1	0.3	0.5	0.0	0.2	1.2
31	0.0	S	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.2	0.8	0.5	0.2	0.0	0.0	0.1	0.8	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.8
NO.	31	-	31	31	31	31	31	31	31	31	30	30	30	30	30	30	30	31	31	31	31	31	31	31	706	100.0%
MEAN	0.4	-	0.4	0.7	0.7	0.7	0.4	0.4	0.8	1.0	0.9	1.0	0.5	0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.7	0.7	0.7	0.5		
MAX	2.8	-	2.7	7.2	8.1	4.4	2.7	2.0	7.8	5.1	5.1	6.3	3.1	3.9	3.1	2.8	3.6	3.8	1.5	3.1	5.6	5.1	6.9	4.4		



Number of 1HR Exceedences	0
Number of Non-Zero Readings	525
Maximum 1-HR Average	8.1 PPB
Maximum 24-HR Average	2.1 PPB
Monthly Calibration	7
Standard Deviation	1.056
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	0.6 PPB

Lagoon PM_{2.5} (µg/m³) – December 2023

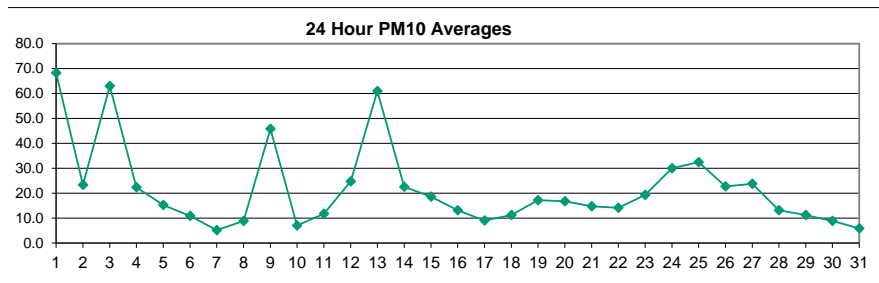
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	0.4	0.0	0.0	3.4	4.5	2.8	2.7	3.4	6.7	5.0	7.0	7.0	4.4	3.9	5.5	3.4	0.5	1.9	2.5	0.2	0.0	3.4	3.8	1.8	3.1	7.0
2	0.5	1.6	1.3	8.2	6.4	4.2	5.5	2.3	1.1	2.3	2.7	1.1	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.9	0.8	1.7	8.2
3	0.0	0.0	2.8	5.5	2.7	1.0	0.9	0.3	0.0	4.3	8.7	5.0	1.1	2.8	5.0	4.9	5.9	4.9	1.5	0.2	8.2	10.9	8.1	5.9	3.8	10.9
4	4.3	1.6	3.2	7.4	5.5	0.0	0.0	0.0	1.6	1.1	0.0	0.0	0.0	2.8	3.4	0.0	0.0	0.4	0.0	0.0	0.0	1.1	2.8	3.4	1.6	7.4
5	0.0	0.0	0.0	0.0	1.8	6.2	2.9	0.0	0.0	1.6	0.7	0.6	1.9	0.6	0.0	0.0	0.0	0.4	0.5	0.2	3.2	3.0	0.0	0.0	1.0	6.2
6	0.2	0.1	0.0	4.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	1.8	7.2	4.8	0.0	0.0	0.0	4.6	4.0	2.1	0.0	0.0	3.6	2.6	1.6	7.2
7	2.3	4.2	2.7	0.0	0.0	0.2	0.2	0.3	0.0	0.0	1.6	1.8	1.3	3.2	5.6	4.1	0.5	0.0	0.6	0.0	0.0	2.1	2.4	0.6	1.4	5.6
8	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.4	2.8	1.7	0.8	6.8	6.5	7.3	6.0	4.8	1.6	0.0	0.0	1.7	1.6	4.0	3.8	1.8	2.3	7.3
9	0.1	0.0	0.4	0.0	0.0	0.8	1.9	0.0	0.0	0.0	1.9	1.9	0.6	0.0	0.0	0.0	0.0	3.2	1.8	0.0	1.1	0.8	0.0	0.0	0.6	3.2
10	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.4	0.0	0.0	0.6	0.6	0.0	1.6	0.8	0.0	0.0	0.3	0.8	0.7	0.0	0.0	0.3	1.6
11	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.1	2.4	1.1	1.0	1.8	1.3	0.7	1.2	0.6	0.0	1.3	1.2	0.0	1.7	0.0	0.0	0.0	0.7	2.4
12	0.0	0.0	0.2	1.9	0.4	1.1	0.0	0.0	2.0	2.9	2.4	0.9	2.1	1.8	4.2	16.3	8.0	1.2	2.3	1.3	0.0	0.0	0.0	0.0	2.0	16.3
13	0.0	0.0	0.0	0.0	2.8	1.5	0.2	0.7	2.6	3.5	3.7	5.6	4.9	2.7	2.1	2.1	1.2	1.2	3.5	2.7	1.9	0.4	0.0	1.2	1.8	5.6
14	2.8	0.9	0.0	0.0	0.0	0.6	2.5	3.7	2.1	4.4	5.0	6.4	5.4	7.5	4.8	2.1	3.3	4.7	2.5	2.4	6.5	6.8	2.5	2.4	3.3	7.5
15	3.7	2.4	1.1	0.1	0.3	0.5	0.1	0.8	1.7	3.5	2.5	2.1	2.7	2.4	0.0	0.0	0.0	1.1	1.5	0.3	2.6	1.3	1.3	0.9	1.4	3.7
16	2.6	3.6	1.0	2.9	3.1	1.2	2.0	3.0	2.1	0.7	4.9	4.9	3.3	1.2	0.0	0.1	11.5	6.4	0.0	0.0	0.0	0.0	0.5	0.4	2.3	11.5
17	0.9	0.3	1.0	1.8	3.6	3.3	6.0	4.2	0.4	0.0	2.8	3.1	0.7	0.0	0.0	0.0	0.4	0.9	0.0	0.3	0.0	0.0	0.0	0.8	1.3	6.0
18	2.0	3.4	2.1	0.0	0.0	0.0	0.0	0.0	1.4	0.6	0.0	0.3	0.7	1.0	0.0	0.0	1.5	1.3	0.0	0.6	2.2	2.4	2.6	3.1	1.0	3.4
19	2.2	3.0	3.7	4.2	5.4	4.0	3.1	2.8	2.9	6.8	6.0	4.0	4.2	1.1	2.7	5.1	4.0	5.6	3.6	0.8	2.3	0.9	0.0	0.0	3.3	6.8
20	0.2	0.1	4.3	4.9	3.1	5.9	5.2	2.6	3.9	2.8	0.7	2.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4	0.0	1.6	5.9
21	0.0	1.3	2.0	0.7	0.6	2.7	1.5	0.0	0.7	1.6	C	C	C	9.9	5.2	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	1.3	9.9
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.8	1.0	1.7	2.9	1.2	1.5	2.0	0.0	1.8	3.1	1.2	2.0	1.0	0.0	0.0	0.9	3.1
23	1.6	1.6	1.7	0.0	0.1	0.8	0.0	1.0	3.4	4.2	3.4	1.2	0.0	4.4	5.3	3.1	2.7	2.3	0.6	1.6	3.2	3.8	2.9	1.8	2.1	5.3
24	0.6	1.8	1.0	1.1	0.0	0.0	0.0	0.0	0.0	2.0	4.6	0.0	0.0	0.4	1.2	0.2	0.0	2.3	0.1	0.0	1.2	2.7	0.8	0.1	0.8	4.6
25	0.0	0.0	0.0	1.6	1.9	0.0	0.2	0.0	0.0	0.0	0.8	1.7	1.1	0.0	0.0	0.0	0.0	0.7	3.4	2.1	2.5	5.0	1.3	0.0	0.9	5.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7	2.4	0.7	0.3	1.4	0.0	0.4	0.0	4.6	1.3	0.0	0.0	0.6	4.6
27	2.4	0.1	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.3	3.5	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.5
28	0.0	0.6	1.4	1.7	0.0	0.0	0.0	3.1	3.6	1.5	4.3	2.9	0.1	0.4	0.0	0.0	1.5	1.3	1.6	3.2	7.2	7.0	4.6	0.6	1.9	7.2
29	0.9	4.2	2.7	0.9	0.8	0.0	0.0	0.0	0.0	0.0	1.1	2.4	0.0	1.7	0.0	0.4	3.4	2.3	0.4	0.0	0.0	0.0	0.0	0.0	0.9	4.2
30	0.0	0.0	0.0	1.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	4.2	1.0	0.0	0.7	5.3	4.4	3.5	1.0	0.0	0.9	5.3
31	0.0	0.0	1.3	0.0	2.9	1.9	0.1	0.0	0.3	0.1	1.8	3.5	2.4	2.0	2.0	1.2	2.4	0.9	0.0	0.1	3.6	2.6	3.0	3.3	1.5	3.6
NO.	31	31	31	31	31	31	31	31	31	31	30	30	30	31	31	31	31	31	31	31	31	31	31	31	741	100.0%
MEAN	0.9	1.0	1.1	1.7	1.6	1.3	1.2	1.0	1.4	1.7	2.3	2.5	2.0	2.2	1.9	1.9	1.6	1.6	1.2	0.9	1.9	2.2	1.5	1.0		
MAX	4.3	4.2	4.3	8.2	6.4	6.2	6.0	4.2	6.7	6.8	8.7	7.0	7.2	9.9	6.0	16.3	11.5	6.4	4.0	5.3	8.2	10.9	8.1	5.9		



Number of 24HR Exceedences	0		
Number of Non-Zero Readings	482		
Maximum 1-HR Average	16.3 UG/M3		
Maximum 24-HR Average	3.8 UG/M3		
Monthly Calibration	3	Operational Time	744 HRS
Standard Deviation	2.006	Operational Uptime	100.0 %
		Monthly Average	1.6 UG/M3

Lagoon PM₁₀ (µg/m³) – December 2023

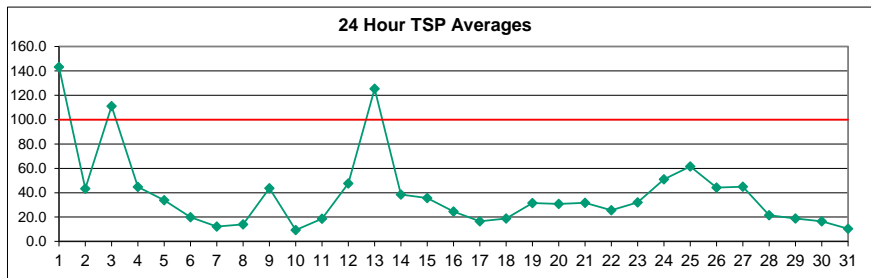
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	74.0	46.0	35.9	110.1	85.6	72.5	78.5	88.0	182.3	130.5	212.9	130.9	101.7	64.6	38.6	18.1	18.1	19.4	11.9	19.3	7.8	24.1	39.3	28.7	68.3	212.9
2	19.7	36.6	22.4	43.5	34.8	22.1	32.0	58.4	59.9	49.3	45.9	22.4	12.9	30.2	13.3	7.0	4.5	1.9	6.4	13.7	9.2	8.4	3.4	0.9	23.3	59.9
3	8.3	6.5	11.4	15.1	6.9	22.0	17.9	12.8	15.3	38.4	31.9	21.5	24.1	78.2	263.5	177.6	102.3	157.0	25.6	22.1	179.4	188.0	56.1	30.6	63.0	263.5
4	5.0	15.1	1.9	9.7	16.5	18.3	15.3	12.2	20.0	17.1	31.4	16.6	23.1	20.4	24.3	20.9	16.4	28.1	28.4	30.0	53.3	28.7	36.2	48.3	22.4	53.3
5	28.9	25.7	7.5	6.9	16.1	12.1	15.3	19.7	5.9	4.4	24.5	19.7	23.0	28.0	37.5	16.2	4.7	10.3	7.0	5.0	18.8	8.7	8.2	12.5	15.3	37.5
6	9.9	6.7	8.0	15.1	3.0	4.8	4.9	7.6	10.1	7.9	11.0	8.5	10.3	16.7	5.1	4.9	21.8	83.3	5.5	2.5	1.2	3.2	3.7	4.5	10.8	83.3
7	6.6	6.9	4.8	0.9	0.1	2.0	2.5	2.1	3.3	0.0	16.2	6.4	5.9	4.0	23.0	7.6	6.4	4.3	1.8	0.0	1.2	5.5	7.0	5.3	5.2	23.0
8	2.0	0.0	0.0	4.1	4.7	6.1	7.2	4.4	5.7	7.3	11.4	16.3	16.8	14.8	15.5	10.0	7.7	4.5	11.3	8.5	10.0	15.0	19.2	9.4	8.8	19.2
9	5.5	3.7	8.6	16.7	8.2	20.4	6.6	19.7	7.0	12.3	16.6	20.4	70.1	46.7	67.5	33.4	12.8	19.3	71.1	308.5	238.2	41.2	24.9	20.3	45.8	308.5
10	8.4	7.5	15.1	22.5	13.2	39.6	18.9	1.2	0.9	0.0	9.1	4.6	0.0	1.3	3.7	0.8	0.0	0.0	2.1	2.2	0.6	5.5	4.4	5.9	7.0	39.6
11	7.2	6.7	2.0	14.9	2.6	1.4	1.0	14.0	26.6	17.9	19.1	35.9	6.5	20.0	19.8	20.6	15.4	10.0	12.9	7.7	5.9	6.6	3.7	3.6	11.8	35.9
12	4.8	9.4	8.6	6.5	4.5	5.4	4.0	17.2	5.8	14.7	17.1	4.8	26.7	57.7	73.5	61.1	32.5	20.4	3.7	19.9	35.5	59.3	58.6	40.6	24.7	73.5
13	56.6	57.9	39.0	34.5	42.6	25.2	54.7	116.1	84.0	114.4	166.3	143.9	99.6	69.0	83.2	74.8	61.2	54.9	26.9	13.6	10.8	12.6	9.0	11.7	60.9	166.3
14	6.8	4.0	1.9	8.0	7.3	9.9	7.8	39.3	43.1	38.3	52.7	65.2	36.0	38.7	43.2	33.0	22.3	20.5	15.3	16.0	15.8	8.9	1.9	15.5	22.6	65.2
15	11.5	9.3	7.0	2.5	0.0	5.3	3.5	3.4	26.4	15.6	17.5	63.4	16.6	6.1	6.1	3.9	31.6	19.8	46.6	48.5	35.3	24.2	21.5	19.2	18.5	63.4
16	20.0	26.1	12.7	38.4	22.9	2.9	17.5	22.3	18.0	1.7	19.2	21.2	11.6	7.5	5.7	22.7	18.4	1.5	6.9	5.5	1.9	2.5	4.3	4.3	13.2	38.4
17	6.5	9.1	7.7	7.3	6.7	8.1	10.3	7.9	8.6	7.0	2.7	1.7	2.6	7.2	15.6	20.2	9.4	7.1	5.8	5.8	1.2	5.5	23.6	28.6	9.0	28.6
18	32.9	27.5	19.1	19.9	6.6	6.5	5.8	8.9	5.7	5.3	9.4	10.8	8.9	12.2	11.1	13.5	11.8	8.3	4.3	3.9	8.3	8.0	6.8	12.4	11.2	32.9
19	24.1	10.6	10.0	14.0	14.8	24.4	22.4	19.1	18.1	19.5	18.4	16.3	10.7	21.9	19.5	25.4	29.5	27.4	22.5	16.7	5.3	7.7	3.7	9.5	17.1	29.5
20	9.0	9.5	19.2	17.8	16.8	33.2	34.2	22.8	33.9	15.3	27.5	29.2	5.0	10.6	7.5	17.8	6.7	6.3	12.7	18.8	11.9	15.6	9.1	11.7	16.8	34.2
21	50.5	23.5	5.0	9.0	19.0	43.9	13.3	21.1	13.2	13.4	C	C	16.4	9.2	6.9	4.2	3.1	3.6	6.9	27.2	7.6	6.0	5.0	5.0	14.7	50.5
22	4.7	6.3	6.2	2.6	0.0	2.6	5.4	3.3	2.1	7.4	12.8	13.3	12.2	37.1	56.1	37.8	32.9	45.2	20.0	9.4	8.5	7.0	3.2	1.6	14.1	56.1
23	6.8	37.3	7.4	4.3	2.2	10.8	7.2	6.5	14.9	12.9	6.2	19.2	18.2	47.9	39.2	37.9	34.4	23.9	7.1	24.2	17.1	12.9	25.5	39.6	19.3	47.9
24	15.7	25.9	14.7	20.0	10.4	28.5	46.3	28.6	28.8	15.4	36.8	43.2	38.0	40.7	53.2	72.9	28.7	17.2	14.0	13.8	25.1	58.7	28.7	14.8	30.0	72.9
25	20.7	23.6	8.7	15.4	3.7	1.1	21.4	29.7	3.0	3.6	5.4	9.7	14.6	13.7	21.4	19.9	38.5	96.3	71.3	60.6	78.1	96.5	60.0	61.1	32.4	96.5
26	43.9	19.2	20.0	33.6	18.2	33.4	19.4	14.8	18.3	21.3	19.1	11.2	23.9	72.1	18.2	10.9	16.9	10.7	12.1	15.5	43.0	10.0	10.7	28.6	22.7	72.1
27	13.1	6.6	7.1	4.4	9.8	6.8	5.6	5.2	0.1	6.7	15.2	7.6	42.4	146.5	114.2	36.3	4.5	8.6	5.0	19.3	60.7	23.0	12.9	8.3	23.7	146.5
28	3.2	3.0	2.1	8.1	4.5	7.0	3.7	6.4	12.3	48.5	12.5	20.9	5.0	6.1	10.3	17.8	6.3	5.4	30.4	26.5	25.9	29.6	10.6	10.0	13.2	48.5
29	11.2	11.9	19.7	11.7	9.2	6.9	12.6	6.5	1.6	2.8	15.3	18.8	10.9	9.5	19.4	37.7	9.0	8.9	10.7	7.3	7.5	5.3	7.4	6.6	11.2	37.7
30	5.1	5.0	5.8	9.3	7.3	3.4	1.3	2.6	0.6	4.2	4.5	8.0	5.9	4.7	6.5	9.1	9.2	23.5	20.0	33.0	19.9	5.9	9.7	7.3	8.8	33.0
31	9.7	5.8	1.8	0.8	2.3	4.5	6.9	8.6	6.3	2.3	3.5	3.1	6.0	10.5	11.5	6.4	11.4	6.3	6.8	5.9	7.5	5.4	2.2	5.8	5.9	11.5
NO.	31	31	31	31	31	31	31	31	31	31	30	30	30	31	31	31	31	31	31	31	31	31	31	31	741	100.0%
MEAN	17.2	15.9	11.0	17.0	12.9	15.8	16.2	20.3	22.0	21.1	29.7	27.2	23.0	31.0	36.7	28.2	20.3	24.3	17.1	25.5	31.4	23.9	16.8	16.5		
MAX	74.0	57.9	39.0	110.1	85.6	72.5	78.5	116.1	182.3	130.5	212.9	143.9	101.7	146.5	263.5	177.6	102.3	157.0	71.3	308.5	238.2	188.0	60.0	61.1		



Number of Non-Zero Readings	732	Operational Time	744 HRS
Maximum 1-HR Average	308.5 UG/M3	Operational Uptime	100.0 %
Maximum 24-HR Average	68.3 UG/M3	Monthly Average	21.7 UG/M3
Monthly Calibration	3		
Standard Deviation	30.67		

Lagoon TSP ($\mu\text{g}/\text{m}^3$) – December 2023

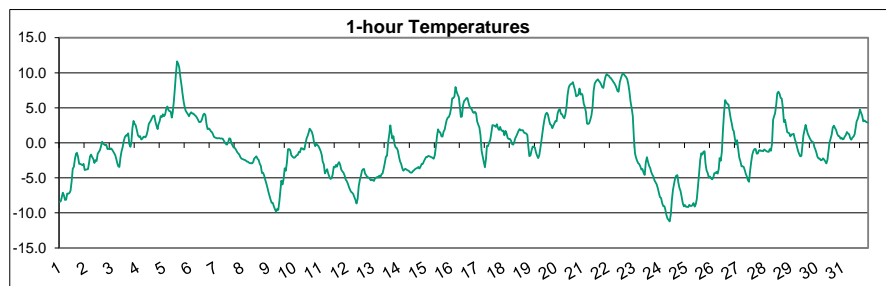
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	160.7	109.5	99.7	217.0	186.4	182.6	191.3	205.9	389.8	219.6	424.5	280.4	224.4	96.3	83.3	44.5	47.7	37.2	31.0	29.2	19.2	40.5	67.5	50.9	143.3	424.5
2	35.6	75.9	43.5	83.1	69.3	35.2	58.4	91.7	102.6	98.5	76.1	33.0	19.3	53.6	27.9	11.4	9.0	16.8	16.1	28.3	18.2	15.4	11.7	10.7	43.4	102.6
3	15.7	10.8	28.2	38.8	25.1	54.6	34.4	28.9	27.4	65.0	55.2	47.5	50.1	122.0	364.7	323.2	207.6	257.1	32.3	37.6	263.2	401.5	105.7	71.2	111.2	401.5
4	24.7	28.5	22.5	24.7	33.3	47.4	31.3	37.0	35.4	54.8	60.6	32.3	34.1	28.9	38.7	37.1	22.0	47.6	57.5	81.0	87.6	56.6	61.8	88.4	44.7	88.4
5	52.1	58.5	21.3	6.5	13.0	25.9	31.2	49.5	20.5	19.9	57.9	29.2	59.9	63.3	89.9	54.2	30.6	30.0	5.5	12.4	30.7	20.8	22.1	9.8	33.9	89.9
6	16.6	13.9	9.3	19.5	12.8	16.5	5.5	5.6	17.8	18.7	13.0	24.2	28.1	20.5	15.7	9.7	34.3	133.5	21.1	4.5	4.3	8.9	10.5	12.4	19.9	133.5
7	10.7	12.2	12.2	8.7	10.2	12.4	7.2	16.3	10.7	13.0	20.5	14.3	21.4	21.3	36.9	8.5	6.5	6.7	5.3	7.0	10.7	9.4	7.4	5.8	12.3	36.9
8	3.8	7.4	6.4	8.2	10.4	9.4	9.7	6.2	7.7	14.4	12.8	23.5	25.2	22.6	17.3	19.0	18.5	8.9	8.2	11.7	20.1	26.2	26.5	11.4	14.0	26.5
9	11.7	16.8	21.2	25.1	21.8	39.4	25.8	21.2	19.4	32.2	28.4	44.3	96.0	58.6	52.1	29.1	21.1	43.5	44.6	185.3	146.7	26.2	26.1	13.2	43.7	185.3
10	11.2	9.4	11.4	10.2	7.5	8.5	8.5	10.4	7.9	7.9	7.0	10.4	10.2	6.7	3.6	5.3	10.2	7.2	21.1	2.5	5.3	21.4	13.9	7.5	9.4	21.4
11	10.7	9.7	7.2	12.7	8.1	5.0	4.4	19.6	41.4	19.6	32.5	48.1	22.7	31.6	27.6	30.2	20.4	17.0	17.5	16.3	3.8	15.3	13.7	11.4	18.6	48.1
12	12.2	12.2	16.0	13.4	7.9	7.7	5.6	27.8	17.3	17.5	21.4	7.6	43.0	101.8	131.8	113.9	62.2	54.9	21.8	37.5	77.9	115.0	135.5	81.2	47.6	135.5
13	123.1	125.1	77.2	88.8	78.6	70.2	132.6	225.8	173.3	212.9	350.4	279.8	165.2	140.7	169.4	149.3	136.2	105.8	76.2	26.4	29.6	32.9	14.7	23.9	125.3	350.4
14	20.5	17.2	12.7	16.3	5.8	12.7	17.3	72.7	83.9	74.6	106.4	99.4	46.5	35.9	73.6	43.0	36.5	41.4	24.2	23.9	21.7	13.4	8.9	15.5	38.5	106.4
15	11.9	14.4	11.4	9.7	8.5	6.5	12.9	12.4	39.9	33.2	41.5	83.9	32.8	9.2	13.5	18.0	54.7	47.1	115.4	106.8	73.6	38.3	32.3	28.0	35.7	115.4
16	18.4	45.6	27.7	56.0	38.4	11.5	35.2	41.0	31.2	18.3	23.5	34.6	16.8	5.3	17.4	45.5	42.3	13.4	9.0	20.7	9.2	14.2	9.7	3.6	24.5	56.0
17	13.2	16.0	11.4	7.0	5.5	17.3	13.2	10.3	26.2	7.5	7.7	6.7	9.2	11.5	34.7	28.8	16.0	11.2	12.9	8.7	9.7	9.1	42.1	61.8	16.6	61.8
18	50.3	54.2	32.0	30.1	19.5	12.7	15.9	3.8	7.7	5.3	19.7	10.5	14.8	20.2	11.0	21.0	22.4	17.0	8.7	20.5	13.7	13.4	13.9	15.2	18.9	54.2
19	54.6	32.3	31.0	22.4	21.3	46.3	48.2	29.4	25.9	39.5	17.1	30.6	26.6	35.7	44.0	45.1	57.1	40.5	43.8	29.0	9.2	6.0	8.5	13.2	31.6	57.1
20	17.0	28.6	33.7	25.4	30.2	51.5	51.8	37.8	59.6	29.1	48.3	55.2	14.7	16.0	12.8	42.7	10.7	12.5	30.3	30.8	27.5	29.0	15.5	26.8	30.7	59.6
21	88.1	32.2	18.5	27.2	30.7	143.6	54.7	44.0	23.5	24.7	C	C	C	24.2	9.7	8.9	9.7	9.4	8.2	15.0	51.4	21.3	10.7	9.2	31.7	143.6
22	9.2	12.4	7.5	8.2	8.6	3.7	0.3	0.4	2.2	14.1	25.6	22.8	33.0	65.4	86.7	55.0	68.2	73.2	34.0	19.6	22.7	24.3	10.9	8.0	25.7	86.7
23	11.6	75.2	11.7	8.5	8.9	9.7	9.2	7.9	26.1	18.7	16.1	23.9	26.0	68.7	58.3	64.2	55.5	50.5	25.4	38.8	26.2	33.2	33.4	60.0	32.0	75.2
24	38.8	28.3	26.7	35.6	26.0	49.8	73.9	58.3	41.1	46.2	61.0	69.5	62.8	49.1	93.0	136.9	50.8	35.0	20.0	20.9	54.6	80.3	36.1	30.2	51.0	136.9
25	35.2	38.3	6.7	20.5	6.9	3.7	38.3	54.2	14.8	5.4	17.8	35.7	34.7	30.5	43.9	34.1	61.9	72.1	145.4	124.0	189.1	219.1	113.1	130.9	61.5	219.1
26	96.4	59.6	39.3	80.7	41.3	60.2	46.6	24.6	37.9	26.7	37.9	26.6	8.6	110.9	43.1	28.1	28.3	23.6	34.4	24.8	87.4	28.3	10.0	54.5	44.1	110.9
27	35.9	9.9	13.5	17.6	23.3	8.8	5.8	9.9	7.9	6.4	20.3	25.0	71.5	246.6	229.3	72.4	19.7	15.1	4.4	36.3	76.9	60.6	42.7	20.7	45.0	246.6
28	17.2	12.9	12.4	8.8	2.6	6.7	11.1	25.8	20.0	66.3	26.7	20.8	11.1	9.5	31.6	31.6	16.0	16.7	42.7	22.9	39.9	35.7	12.2	13.5	21.4	66.3
29	23.6	17.4	28.4	27.4	14.4	13.7	12.4	12.9	9.9	8.7	29.2	38.3	15.8	19.7	32.8	62.1	22.0	13.2	13.2	9.4	8.1	5.9	4.5	8.2	18.8	62.1
30	7.7	6.2	10.3	16.5	7.6	5.8	5.2	6.2	4.0	7.4	4.6	13.6	7.6	16.6	14.8	21.5	23.3	34.3	38.5	56.1	37.5	12.6	24.3	13.4	16.5	56.1
31	7.7	8.1	6.2	7.2	10.4	8.7	8.2	7.7	12.2	8.3	17.2	8.1	16.6	14.3	18.5	10.8	17.3	14.1	9.2	8.7	10.4	9.4	6.5	6.5	10.5	18.5
NO.	31	31	31	31	31	31	31	31	31	31	30	30	30	31	31	31	31	31	31	31	31	31	31	31	741	100.0%
MEAN	33.7	32.2	23.1	31.7	25.6	31.9	32.5	38.9	43.4	39.8	56.0	49.3	41.6	50.2	62.2	51.8	40.0	42.1	31.5	35.4	47.9	46.6	30.7	29.6		
MAX	160.7	125.1	99.7	217.0	186.4	182.6	191.3	225.8	389.8	219.6	424.5	280.4	224.4	246.6	364.7	323.2	207.6	257.1	145.4	185.3	263.2	401.5	135.5	130.9		



Number of 24HR Exceedences	3
Number of Non-Zero Readings	741
Maximum 1-HR Average	424.5 UG/M3
Maximum 24-HR Average	143.3 UG/M3
Monthly Calibration	3
Standard Deviation	52.1
Operational time	744 HRS
Operational Uptime	100.0 %
Monthly Average	39.4 UG/M3

Lagoon Temperature (°C) – December 2023

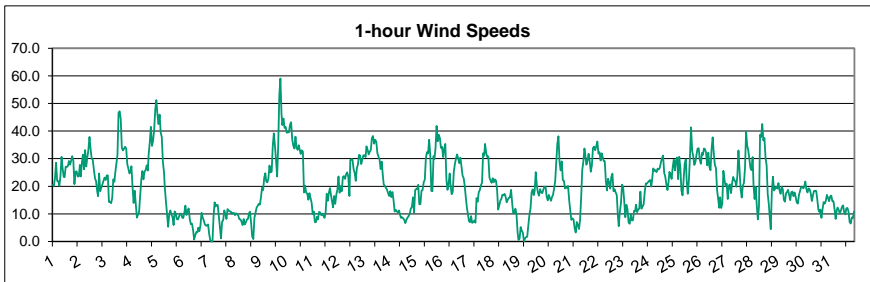
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	-8.4	-8.3	-7.7	-7.1	-7.5	-8.2	-8.1	-7.2	-7.3	-7.2	-6.8	-5.5	-3.7	-3.4	-2.3	-1.5	-1.4	-2.0	-3.0	-3.0	-3.1	-3.2	-3.0	-3.9	-5.1	-1.4
2	-3.8	-3.8	-3.7	-2.8	-2.0	-1.7	-2.1	-2.3	-2.9	-2.5	-2.6	-1.6	-1.3	-1.0	-0.5	0.1	-0.1	-0.2	-0.4	-0.3	-0.9	-0.9	-0.9	-0.8	-1.6	0.1
3	-0.9	-1.2	-1.4	-1.7	-2.3	-2.8	-3.4	-3.4	-2.1	-1.2	-0.6	0.3	0.8	1.1	1.0	1.3	-0.2	-0.6	0.0	2.1	3.1	2.7	2.5	1.8	-0.2	3.1
4	1.1	0.8	0.9	0.5	0.6	0.9	0.9	0.8	1.1	1.7	2.7	2.9	3.2	3.6	3.9	3.9	3.0	2.4	1.9	2.7	3.1	3.8	3.7	4.1	2.3	4.1
5	3.8	4.0	4.8	5.2	4.7	4.5	4.5	3.6	4.2	5.8	7.7	9.9	11.6	11.3	10.7	9.4	8.2	7.0	5.9	5.0	4.6	4.3	4.1	3.8	6.2	11.6
6	4.2	4.4	4.2	4.2	4.0	3.9	3.6	3.4	3.0	2.9	3.0	3.4	3.9	4.2	4.0	2.7	2.0	2.0	1.9	1.6	1.5	1.3	0.8	0.7	3.0	4.4
7	0.7	0.6	0.7	0.7	0.6	0.6	0.6	0.3	0.0	-0.2	-0.3	0.1	0.6	0.6	0.0	-0.4	-0.7	-0.7	-1.0	-1.3	-1.5	-1.7	-2.0	-2.2	-0.2	0.7
8	-2.3	-2.4	-2.4	-2.5	-2.6	-2.7	-2.8	-2.9	-2.9	-2.9	-2.7	-2.3	-2.1	-1.9	-2.3	-2.4	-3.0	-3.3	-4.3	-4.3	-4.6	-5.3	-5.8	-6.4	-3.2	-1.9
9	-7.0	-7.5	-8.1	-8.6	-8.6	-9.1	-9.5	-9.8	-9.5	-9.6	-8.3	-6.7	-5.4	-6.0	-5.2	-3.6	-4.0	-2.8	-0.9	-0.9	-1.0	-1.8	-2.0	-2.1	-5.7	-0.9
10	-2.1	-2.0	-1.8	-1.8	-1.3	-1.4	-0.8	-0.8	-0.9	-1.0	-0.1	0.6	1.0	1.5	2.0	1.8	1.5	1.0	0.0	-0.5	-0.1	-0.3	-0.5	-0.8	-0.3	2.0
11	-1.2	-1.8	-2.7	-3.1	-4.4	-4.1	-3.8	-4.4	-4.8	-5.2	-5.0	-4.6	-3.4	-3.5	-3.2	-3.4	-3.0	-2.8	-3.1	-3.8	-4.1	-4.3	-4.7	-5.2	-3.7	-1.2
12	-5.5	-5.8	-6.3	-6.6	-7.0	-7.1	-7.3	-7.8	-8.1	-8.7	-8.0	-6.2	-5.3	-4.7	-3.9	-3.7	-3.7	-4.4	-4.6	-5.0	-4.9	-5.1	-5.4	-5.2	-5.9	-3.7
13	-5.3	-5.4	-5.1	-5.0	-4.9	-4.9	-4.7	-4.9	-4.5	-4.4	-3.7	-2.9	-2.0	-1.8	0.0	1.2	2.5	1.6	0.6	1.0	-0.2	-0.7	-0.7	-1.1	-2.3	2.5
14	-2.0	-2.7	-3.0	-3.7	-4.0	-3.8	-3.7	-3.8	-3.9	-4.0	-4.2	-4.3	-4.2	-4.0	-3.9	-3.7	-3.6	-3.6	-3.5	-3.7	-3.4	-3.0	-3.0	-2.6	-3.5	-2.0
15	-2.3	-2.0	-2.0	-1.9	-1.9	-2.0	-2.1	-2.1	-2.3	-1.8	-0.6	0.9	1.9	1.6	1.5	0.9	0.9	1.6	1.9	2.6	3.3	3.6	3.7	4.2	0.3	4.2
16	5.0	6.3	6.4	6.6	8.0	7.3	6.8	6.5	5.3	3.7	3.8	5.4	6.0	6.1	6.4	6.4	5.7	5.2	5.0	4.7	4.4	4.2	4.4	4.2	5.6	8.0
17	3.0	2.6	2.2	1.1	-1.1	-2.0	-2.8	-3.5	-2.2	-0.4	-0.5	0.0	0.4	1.4	2.5	2.5	2.4	2.3	2.7	2.1	1.8	2.3	1.9	1.7	0.9	3.0
18	1.7	1.1	1.7	1.3	0.7	0.6	0.6	0.3	-0.2	-0.3	0.0	0.6	0.9	1.3	1.7	2.0	1.8	1.8	1.8	1.4	1.4	1.3	1.1	-0.4	1.0	2.0
19	-1.9	-1.8	-1.1	-0.5	-0.5	-0.7	-1.4	-1.8	-2.2	-1.8	-0.7	0.1	1.4	2.5	3.4	4.1	4.3	4.1	3.3	2.7	2.5	2.1	2.5	2.8	0.9	4.3
20	3.1	3.1	4.2	4.7	4.8	4.2	4.1	3.7	3.5	4.1	5.1	6.8	7.9	8.2	8.4	8.4	8.7	8.1	7.5	6.7	6.7	6.9	7.8	6.9	6.0	8.7
21	7.0	6.8	5.6	5.1	4.4	2.7	2.7	2.8	3.3	3.9	5.1	7.4	8.5	8.8	8.9	9.1	8.8	8.6	8.3	7.9	7.8	8.8	9.5	9.8	6.7	9.8
22	9.6	9.6	9.3	9.2	9.0	8.8	8.5	8.3	7.9	7.4	7.3	8.6	9.2	9.7	9.9	9.8	9.6	9.4	9.1	8.3	7.3	5.9	5.0	3.8	8.3	9.9
23	0.8	-1.5	-2.2	-2.6	-2.9	-3.0	-3.3	-3.8	-3.7	-4.3	-4.6	-2.8	-2.1	-2.7	-3.3	-3.6	-4.1	-4.5	-4.8	-5.4	-5.6	-5.9	-6.4	-7.1	-3.7	0.8
24	-7.7	-7.9	-8.6	-9.1	-9.0	-9.5	-10.3	-10.8	-11.0	-11.2	-10.2	-8.2	-6.7	-5.9	-5.0	-4.7	-4.6	-5.6	-6.4	-6.9	-7.7	-8.6	-9.1	-8.9	-8.1	-4.6
25	-9.1	-9.1	-9.2	-8.9	-9.0	-9.0	-8.9	-8.6	-9.1	-8.8	-8.0	-6.2	-4.4	-2.5	-1.5	-1.7	-1.3	-1.2	-3.0	-4.0	-4.3	-5.0	-4.8	-5.1	-5.9	-1.2
26	-5.2	-5.0	-4.3	-4.3	-4.2	-4.4	-3.7	-2.2	-2.6	-1.3	1.8	4.3	6.1	5.8	5.5	5.5	4.5	3.5	2.8	1.9	1.7	0.6	-0.2	0.4	0.3	6.1
27	-0.9	-2.1	-2.6	-3.3	-3.3	-3.4	-3.9	-4.5	-4.8	-5.3	-5.6	-4.0	-2.7	-1.7	-1.1	-0.9	-0.9	-1.6	-1.5	-1.1	-1.0	-1.2	-1.1	-1.2	-2.5	-0.9
28	-0.9	-1.1	-1.2	-1.3	-1.3	-0.9	-1.1	-0.2	3.3	3.7	4.2	5.4	7.1	7.3	7.0	6.4	6.3	5.1	3.0	3.3	2.4	1.5	1.4	1.3	2.5	7.3
29	0.9	1.2	1.2	1.3	0.6	0.1	-0.6	-1.2	-1.6	-1.9	-1.9	-0.6	1.0	1.8	2.6	1.9	1.3	1.0	0.6	0.3	0.1	0.1	-0.6	-0.9	0.3	2.6
30	-1.4	-2.0	-2.2	-2.3	-2.5	-2.4	-2.2	-2.4	-2.7	-2.9	-2.4	-1.1	0.0	0.6	1.2	2.2	2.5	2.1	1.8	1.3	1.0	1.0	0.6	0.7	-0.5	2.5
31	0.5	0.5	0.9	1.1	1.5	1.3	1.2	0.7	0.4	0.8	0.9	1.2	2.2	3.1	3.4	3.9	4.7	4.3	3.9	3.1	3.2	3.1	3.0	2.9	2.2	4.7
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100.0%
MEAN	-0.9	-1.0	-1.1	-1.2	-1.3	-1.6	-1.7	-1.9	-1.8	-1.7	-1.1	0.0	1.0	1.3	1.7	1.7	1.6	1.2	0.8	0.6	0.4	0.2	0.1	-0.2		
MAX	9.6	9.6	9.3	9.2	9.0	8.8	8.5	8.3	7.9	7.4	7.7	9.9	11.6	11.3	10.7	9.8	9.6	9.4	9.1	8.3	7.8	8.8	9.5	9.8		



Number of Non-Zero Readings	744
Maximum 1-HR Average	11.6 C
Maximum 24-HR Average	8.3 C
Monthly Calibration	0
Standard Deviation	4.489
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Average	-0.2 C

Lagoon Wind Speed (km/hr) – December 2023

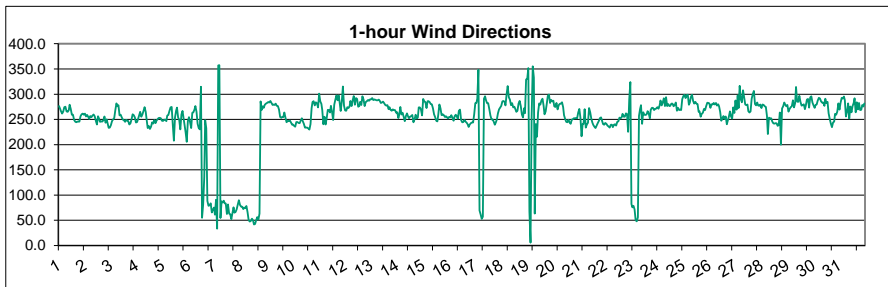
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	20.4	20.3	22.9	28.5	22.0	21.9	20.2	23.6	30.7	26.4	23.3	23.3	27.1	27.0	27.2	29.2	27.8	29.2	30.9	29.3	20.8	25.2	25.4	23.5	25.3	30.9
2	23.6	27.7	23.5	28.3	31.4	26.1	33.1	27.2	30.4	33.2	37.8	33.5	30.0	29.5	26.1	23.0	21.8	18.3	16.4	24.6	18.2	19.5	20.7	21.9	26.1	37.8
3	23.2	22.2	23.9	23.9	14.3	14.4	13.9	15.8	22.5	21.6	25.0	28.1	31.3	46.6	47.1	44.3	34.0	32.9	33.6	34.3	33.6	27.9	26.4	24.6	27.7	47.1
4	25.5	27.2	19.9	13.9	18.4	13.5	8.6	9.7	10.8	16.6	22.3	25.5	22.5	25.3	25.9	27.6	25.7	31.8	35.9	41.5	34.6	36.5	40.4	47.7	25.3	47.7
5	51.2	46.0	42.6	46.0	39.4	37.8	28.8	25.2	19.4	14.4	10.0	5.3	9.8	11.3	9.8	8.9	6.0	10.9	10.1	8.1	8.0	9.0	10.1	10.1	19.9	51.2
6	8.7	8.5	10.3	13.0	9.6	11.1	12.0	8.1	6.2	6.5	4.3	0.7	2.2	3.4	3.3	5.0	3.7	5.7	10.4	8.7	7.7	6.3	5.7	5.8	7.0	13.0
7	6.2	2.7	0.5	0.0	0.0	9.3	14.1	12.7	13.2	13.3	9.2	5.2	1.1	7.2	7.7	11.2	10.0	8.2	11.7	11.3	10.8	10.9	9.9	10.3	8.2	14.1
8	10.4	9.5	10.2	9.8	9.4	8.1	8.0	7.2	6.0	8.1	6.1	7.0	8.0	8.2	10.2	10.8	6.6	1.8	0.9	8.5	10.4	12.3	12.9	13.6	8.5	13.6
9	13.3	16.0	19.5	18.6	23.2	24.7	21.8	21.4	22.8	27.5	25.1	25.3	34.5	39.1	34.6	29.4	23.5	35.0	52.9	59.0	46.2	42.1	44.5	41.1	30.9	59.0
10	41.5	39.4	39.5	39.6	42.3	43.2	37.1	34.7	33.7	37.9	33.9	33.2	34.8	33.3	31.7	33.0	32.5	17.7	20.2	17.6	17.4	15.1	17.5	15.7	30.9	43.2
11	14.0	9.9	10.8	7.0	7.0	8.9	8.0	10.7	10.5	9.5	10.0	9.3	8.5	10.5	17.3	14.7	17.7	19.4	16.6	14.3	12.3	16.5	13.6	16.9	12.2	19.4
12	18.8	23.5	17.7	20.0	18.2	23.4	23.7	22.7	24.4	25.1	23.3	16.4	29.5	29.8	29.7	26.2	24.9	22.0	26.6	27.9	31.3	31.1	28.0	29.7	24.7	31.3
13	31.2	31.3	30.6	34.5	33.4	31.5	32.5	33.2	37.5	38.2	35.4	36.8	36.1	32.0	30.7	29.6	26.2	28.9	23.9	20.7	20.1	19.4	18.8	17.5	29.6	38.2
14	16.5	18.2	16.1	17.9	14.9	10.9	11.5	11.0	10.4	11.3	9.6	8.5	8.8	8.4	7.8	6.7	7.9	8.6	9.2	10.0	11.9	12.5	16.0	10.5	11.5	18.2
15	18.6	19.0	18.9	20.6	13.5	13.5	18.4	18.6	21.4	22.4	30.2	32.3	31.9	36.8	31.6	18.3	18.2	30.9	29.8	33.7	41.8	36.3	38.7	37.4	26.4	41.8
16	33.9	34.3	30.6	33.7	35.3	22.4	18.7	21.0	24.7	20.4	17.1	18.0	25.4	28.1	30.1	31.6	30.1	28.4	30.4	27.2	23.9	23.0	20.1	15.8	26.0	35.3
17	12.1	10.2	7.5	7.0	9.2	6.7	7.1	7.6	6.8	15.7	14.4	17.9	18.6	20.3	21.2	31.9	31.0	35.3	32.1	30.6	30.9	23.1	22.1	21.2	18.4	35.3
18	22.9	21.5	22.5	22.0	18.7	11.5	13.0	14.8	15.3	16.9	16.7	17.3	16.3	14.2	15.1	15.8	15.9	18.7	14.0	10.2	10.4	11.9	9.8	3.2	15.3	22.9
19	0.5	1.0	5.3	3.9	3.2	0.0	1.1	1.6	1.8	5.7	9.6	12.0	17.7	18.8	16.8	18.2	25.1	20.3	17.7	16.5	19.0	17.8	17.5	18.8	11.2	25.1
20	19.9	19.7	16.3	14.9	16.9	15.7	14.8	16.0	16.9	19.1	21.9	28.9	35.5	38.1	28.8	25.8	29.0	22.2	21.9	19.2	19.5	19.5	20.2	15.0	21.5	38.1
21	11.2	7.8	8.4	7.9	4.9	3.2	7.0	5.9	4.5	7.9	16.1	25.9	28.9	33.7	31.3	27.8	29.2	31.8	29.2	25.3	27.6	33.8	34.4	33.1	19.9	34.4
22	34.5	36.2	31.9	32.3	29.3	31.9	30.7	29.2	29.1	21.8	18.5	22.7	21.4	19.2	23.4	24.5	18.2	18.9	17.7	16.8	9.4	5.6	10.6	13.8	22.8	36.2
23	20.6	19.8	14.7	8.8	13.3	11.6	6.9	6.4	9.8	7.6	7.7	11.1	10.9	13.3	10.6	11.5	11.9	18.1	11.9	12.7	13.4	18.0	21.0	21.0	13.0	21.0
24	21.5	21.9	22.2	19.9	22.6	26.5	25.5	25.8	25.1	26.4	26.1	26.7	28.6	30.2	31.1	24.8	23.5	20.8	18.6	21.5	25.2	24.3	22.6	26.8	24.5	31.1
25	29.6	25.8	29.2	30.4	22.5	30.7	26.7	18.4	16.7	22.4	28.2	29.8	22.1	17.3	22.1	30.7	41.4	32.9	30.9	27.7	28.8	31.4	33.6	33.8	27.6	41.4
26	29.6	28.1	32.1	31.3	33.7	33.5	32.0	27.6	32.2	27.1	25.8	33.5	37.7	32.0	27.8	26.6	18.8	15.5	12.2	16.0	12.1	13.7	25.6	22.4	26.1	37.7
27	20.1	20.9	15.4	20.2	20.7	17.5	21.2	23.4	22.2	21.8	19.8	23.8	32.9	26.0	19.0	15.9	20.2	21.2	26.5	39.8	34.8	32.9	29.8	26.6	23.9	39.8
28	25.8	30.6	20.4	15.3	19.8	12.9	8.0	12.8	38.7	37.8	42.5	36.6	37.5	30.2	27.5	17.2	13.5	8.2	4.4	18.3	23.4	18.5	19.1	19.9	22.5	42.5
29	19.2	21.2	18.5	17.3	19.8	18.9	15.0	14.4	17.5	17.8	18.7	17.0	15.0	17.8	18.1	16.4	17.7	16.2	14.1	13.7	16.8	18.3	19.7	19.7	17.5	21.2
30	19.2	19.7	21.7	19.0	17.8	19.2	18.9	17.4	14.7	16.7	18.3	18.4	18.3	15.2	11.5	10.7	11.6	8.5	11.7	14.2	13.7	14.7	16.9	15.7	16.0	21.7
31	14.6	16.3	16.7	14.6	14.6	11.7	8.1	11.3	12.3	11.4	10.1	11.1	12.5	13.1	10.6	9.8	12.0	12.1	10.7	7.1	6.5	8.7	8.4	10.8	11.5	16.7
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100.0%
MEAN	21.2	21.2	20.0	20.0	19.3	18.5	17.6	17.3	19.0	19.6	19.9	20.7	22.4	23.1	22.1	21.2	20.5	20.3	20.4	21.5	20.7	20.5	21.3	20.8		
MAX	51.2	46.0	42.6	46.0	42.3	43.2	37.1	34.7	38.7	38.2	42.5	36.8	37.7	46.6	47.1	44.3	41.4	35.3	52.9	59.0	46.2	42.1	44.5	47.7		



Number of Non-Zero Readings	743		
Maximum 1-HR Average	59.0 KM/HR		
Maximum 24-HR Average	30.9 KM/HR		
Monthly Calibration	0	Operational Time	744 HRS
Standard Deviation	10.09	Operational Uptime	100.0 %
		Monthly Average	20.4 KM/HR

Lagoon Wind Direction (°) – December 2023

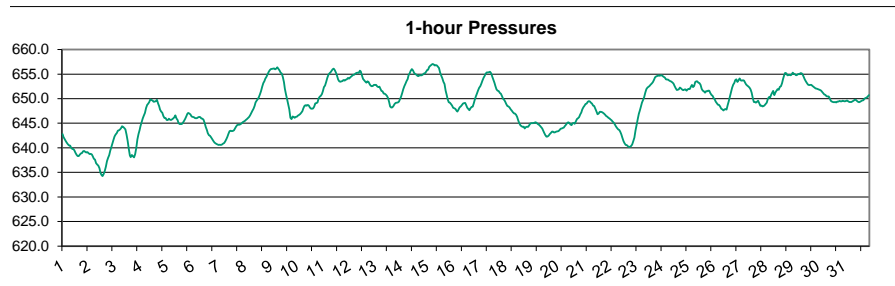
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	276.4	272.0	266.4	261.3	265.4	274.4	275.3	265.8	265.1	268.1	279.2	270.9	259.4	259.4	249.2	245.5	244.5	245.5	245.8	245.5	256.3	260.0	261.6	259.1	260.3	279.2	
2	261.3	255.8	258.8	254.9	251.0	256.6	254.6	257.3	259.5	256.1	247.4	239.8	256.0	252.2	245.2	246.0	245.5	248.4	255.8	243.3	249.9	240.6	233.3	233.9	250.5	261.3	
3	238.6	246.3	249.8	252.7	268.7	281.8	276.2	278.0	257.9	259.4	254.0	249.4	248.2	245.0	249.0	247.2	247.0	239.9	242.2	249.8	260.2	258.5	254.0	243.7	251.6	281.8	
4	244.9	249.8	257.4	265.2	255.4	259.7	266.7	274.2	264.8	246.4	233.0	236.9	231.1	235.6	244.5	241.8	248.6	242.7	248.0	250.0	252.8	253.0	252.3	247.4	248.2	274.2	
5	247.0	249.0	249.5	246.4	257.7	258.9	266.8	274.0	274.7	240.0	207.7	253.7	267.1	273.5	254.1	249.2	230.2	259.9	266.9	251.2	236.5	223.9	205.7	246.3	252.4	274.7	
6	254.2	244.5	233.0	263.3	264.2	270.0	276.5	265.2	241.4	232.8	230.4	314.9	55.0	81.8	136.0	248.6	232.4	88.5	78.8	79.5	83.5	65.4	71.3	75.3	248.2	314.9	
7	61.1	90.4	33.2	357.0	357.7	54.5	87.6	85.4	88.7	83.5	83.0	62.3	81.2	63.3	61.8	52.1	64.1	75.8	64.8	66.5	71.7	81.0	89.6	80.3	74.2	357.7	
8	76.7	76.7	71.9	75.2	74.0	78.4	66.2	50.6	47.2	48.8	53.0	49.7	41.7	42.4	50.0	56.0	51.5	63.3	285.7	268.9	275.9	272.9	279.1	281.1	40.8	285.7	
9	282.6	284.3	283.7	286.4	282.4	278.5	279.6	278.8	281.2	276.9	276.5	269.4	254.7	253.1	254.8	254.3	263.8	253.4	244.2	247.1	246.6	248.0	243.9	239.4	259.7	286.4	
10	240.0	237.4	235.3	244.7	244.8	243.0	242.7	247.8	252.1	246.4	241.3	233.5	233.7	233.6	231.8	229.7	240.7	272.5	284.5	286.0	277.7	283.9	281.8	273.7	246.3	286.0	
11	301.1	285.5	280.7	268.6	240.5	255.2	239.7	252.7	269.0	268.4	263.8	277.0	265.0	248.5	279.3	289.3	297.4	287.8	297.6	281.3	266.6	285.3	315.0	277.4	278.5	315.0	
12	267.6	267.4	274.1	272.6	275.7	286.5	276.6	288.0	296.1	279.0	292.5	290.4	274.9	276.6	285.0	278.6	296.0	289.8	276.6	284.3	286.2	288.5	286.9	289.7	282.8	296.1	
13	289.8	292.1	288.4	289.7	288.8	287.9	287.9	289.4	287.1	282.6	283.4	285.3	282.1	278.5	277.5	278.0	270.4	274.1	268.9	267.4	270.0	268.3	268.4	263.1	281.5	292.1	
14	264.1	252.5	258.9	274.6	259.9	263.1	255.3	246.4	256.4	262.0	255.9	252.3	255.5	256.7	258.7	244.2	249.9	259.2	251.7	254.0	273.9	273.8	269.3	257.8	259.8	274.6	
15	290.5	285.9	284.3	272.6	286.0	286.2	284.3	280.6	280.1	272.2	260.1	254.4	247.3	246.0	259.4	279.6	272.0	258.6	260.2	258.3	254.7	256.1	254.1	251.9	263.9	290.5	
16	254.7	254.0	258.6	252.9	247.5	256.8	259.3	255.2	251.2	267.2	269.6	248.8	244.1	244.7	249.2	245.7	243.4	240.8	235.1	239.9	242.7	243.8	244.0	260.1	249.6	269.6	
17	282.1	282.8	291.2	348.1	69.5	61.7	52.6	57.0	290.9	296.0	288.3	282.1	282.2	270.9	258.1	250.2	249.9	245.8	239.6	243.6	249.4	261.8	269.7	273.4	264.8	348.1	
18	277.0	285.7	286.7	285.0	277.8	299.3	316.0	294.0	289.1	278.4	282.0	274.0	275.0	271.2	265.0	267.2	281.1	286.6	276.3	259.7	253.9	271.9	262.5	329.1	280.1	329.1	
19	330.2	351.8	67.4	5.7	256.1	355.5	333.0	63.4	240.8	215.8	263.8	281.8	279.3	287.6	291.0	277.0	260.3	265.6	280.3	296.8	299.5	282.6	288.8	285.6	281.8	355.5	
20	286.8	276.2	274.7	282.6	269.8	278.3	280.8	281.3	284.0	274.2	258.6	250.7	245.1	244.2	249.3	243.8	241.0	249.5	250.6	252.1	252.2	252.6	252.0	263.8	258.9	286.8	
21	270.9	252.9	216.6	241.2	240.6	270.1	233.6	239.8	243.3	272.5	264.1	251.5	243.6	238.8	235.6	232.9	237.6	242.6	246.8	252.8	254.1	246.3	240.8	239.5	244.5	272.5	
22	242.9	241.0	237.6	235.7	233.8	239.5	239.5	234.5	239.5	240.2	237.7	245.2	246.0	253.6	252.1	254.6	261.2	255.4	255.1	262.0	260.4	225.4	289.0	324.1	246.2	324.1	
23	82.0	75.4	78.7	71.7	49.9	47.7	55.8	257.1	270.7	278.1	241.3	263.9	259.2	258.7	259.5	266.2	261.4	252.4	268.9	272.7	272.8	268.7	270.7	271.4	277.0	278.1	
24	274.2	271.2	277.9	287.3	277.9	283.6	291.9	276.4	294.2	276.6	280.4	276.6	277.1	281.4	281.5	276.2	278.8	283.3	267.3	272.9	268.7	269.3	268.4	290.0	278.7	294.2	
25	296.1	298.9	292.4	298.2	299.0	279.3	283.2	294.7	299.1	286.5	281.2	284.6	281.5	280.4	265.1	265.8	255.5	260.9	263.3	270.5	268.5	276.4	283.1	282.8	279.9	299.1	
26	281.9	273.0	279.9	279.6	282.7	279.5	282.4	277.3	280.1	276.0	265.1	247.2	251.8	256.6	251.0	255.8	240.4	248.8	255.0	265.8	255.9	251.9	273.8	263.0	267.4	282.7	
27	287.3	269.3	297.4	272.6	316.4	289.6	284.1	307.5	294.2	279.5	278.0	279.5	266.5	263.8	265.9	290.9	300.3	306.5	280.6	277.7	283.4	277.7	276.7	279.6	283.1	316.4	
28	272.6	279.7	278.5	276.0	274.7	256.8	220.8	253.6	251.9	252.0	245.4	242.2	241.7	242.7	242.3	237.1	238.7	263.8	199.7	271.6	276.2	283.3	278.8	276.1	257.4	283.3	
29	278.8	265.5	270.8	274.2	275.9	288.1	273.8	282.3	314.3	285.1	284.9	296.7	284.8	277.2	278.1	279.8	270.1	277.3	289.0	290.4	273.2	293.6	295.8	283.7	282.4	314.3	
30	277.6	272.9	278.8	279.6	287.4	292.9	291.3	285.5	283.1	283.3	276.8	291.1	282.3	284.6	262.1	250.9	241.6	234.6	243.8	245.6	261.1	259.1	265.6	281.9	274.4	292.9	
31	269.4	283.6	292.7	291.3	295.2	288.3	255.9	264.9	281.9	251.6	275.4	263.9	276.3	282.8	291.8	264.3	283.9	269.7	282.8	268.7	268.9	278.7	275.4	281.7	278.0	295.2	
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100.0%
MEAN	253.6	252.4	242.1	253.8	252.5	248.4	244.8	243.8	259.0	252.8	250.1	252.2	241.6	241.5	243.0	245.1	245.1	243.3	248.6	250.8	251.7	251.7	254.9	258.3			
MAX	330.2	351.8	297.4	357.0	357.7	355.5	333.0	307.5	314.3	296.0	292.5	314.9	284.8	287.6	291.8	290.9	300.3	306.5	297.6	296.8	299.5	293.6	315.0	329.1			



Number of Non-Zero Readings	744
Maximum 1-HR Average	358 degrees
Maximum 24-HR Average	283 degrees
Operational Time	744 HRS
Monthly Calibration	0
Operational Uptime	100.0 %
Standard Deviation	59.43
Monthly Average	249.2 degrees

Lagoon Pressure (mmHg) – December 2023

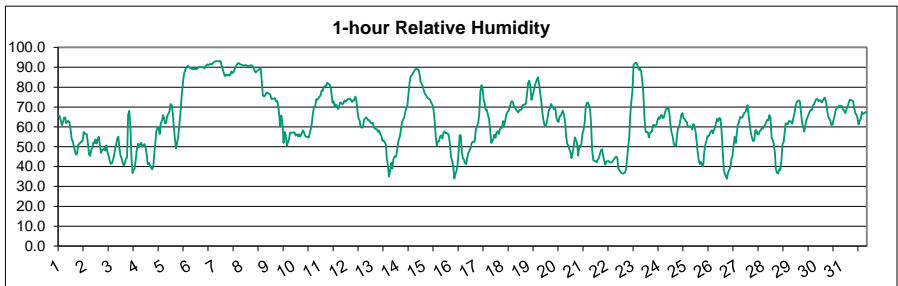
Day	HOUR																								MEAN	MAX
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1	642.8	642.2	641.8	641.4	641.0	640.7	640.5	640.4	640.0	639.8	639.8	639.5	639.0	638.6	638.3	638.6	638.9	639.0	639.3	639.4	639.2	639.0	639.1	639.9	642.8	
2	638.9	638.7	638.8	638.6	638.3	637.8	637.6	636.9	636.6	636.4	635.9	634.9	634.4	634.3	634.6	635.3	636.2	637.3	638.0	638.5	639.5	640.0	640.8	641.6	641.6	
3	642.3	642.7	643.0	643.5	643.6	643.8	644.0	644.4	644.2	644.0	643.7	642.7	641.4	639.9	638.4	638.1	638.6	638.3	638.1	638.7	640.0	641.7	642.8	643.6	644.4	
4	644.5	645.2	646.0	646.6	647.1	648.1	648.7	649.0	649.4	649.9	649.7	649.6	649.4	649.4	649.5	649.8	649.1	648.5	647.8	647.4	647.2	646.5	646.1	646.1	647.9	
5	645.6	645.7	645.9	645.8	645.7	645.8	646.0	646.2	646.6	646.0	645.7	645.1	644.8	644.8	644.9	645.1	645.5	645.9	646.4	646.9	647.1	647.0	646.8	646.4	649.9	
6	646.3	646.2	646.1	646.0	646.1	646.2	646.3	646.3	646.0	645.9	645.7	645.0	644.2	643.6	643.0	642.6	642.5	642.1	641.8	641.4	641.1	640.9	640.8	640.7	646.3	
7	640.6	640.6	640.6	640.7	640.9	641.0	641.4	641.8	642.2	642.8	643.4	643.5	643.4	643.4	643.6	644.0	644.3	644.6	644.7	644.7	644.8	645.0	645.2	645.3	643.0	
8	645.5	645.7	645.8	646.1	646.3	646.7	647.1	647.5	648.0	648.5	649.2	649.6	649.9	650.3	650.9	651.6	652.5	653.2	653.6	654.1	654.4	655.0	655.4	655.8	655.8	
9	656.0	656.1	656.1	656.2	656.0	656.1	656.4	656.1	655.7	655.3	655.1	654.4	653.3	652.0	650.9	649.9	648.9	647.8	646.1	645.8	646.4	646.3	646.1	646.3	652.1	
10	646.4	646.6	646.7	646.9	647.1	647.5	648.0	648.5	648.7	648.6	648.7	648.6	648.2	648.0	648.0	648.0	648.4	649.0	649.1	649.3	650.1	650.4	650.6	651.0	648.4	
11	651.5	652.3	652.7	653.4	654.2	654.8	655.2	655.4	655.7	656.0	656.1	655.8	655.3	654.7	653.9	653.5	653.4	653.5	653.6	653.8	653.7	653.9	654.0	654.2	656.1	
12	654.1	654.3	654.5	654.7	654.9	654.9	655.1	655.2	655.3	655.2	655.7	655.5	654.7	654.0	653.8	653.5	653.3	653.5	653.4	653.0	652.7	652.6	652.6	652.8	655.7	
13	652.8	652.8	652.5	652.4	652.4	652.0	651.6	651.5	651.0	651.0	650.8	650.5	650.1	649.2	648.4	648.2	648.2	648.5	648.9	649.1	649.2	649.2	649.4	649.9	650.4	
14	650.3	651.1	651.9	652.5	653.0	653.6	654.0	654.8	655.2	655.7	656.0	655.8	655.3	655.0	654.9	654.7	654.6	654.8	654.8	654.8	654.9	655.1	655.2	655.5	656.0	
15	655.8	655.9	656.5	656.7	656.9	657.1	657.0	656.8	656.8	656.7	656.5	656.2	655.3	654.7	654.2	653.5	653.0	651.6	650.7	649.9	649.3	649.2	648.9	648.6	657.1	
16	648.1	648.1	647.9	647.6	647.4	647.8	648.2	648.4	648.7	649.0	649.1	649.1	648.6	648.2	647.9	647.7	648.1	648.3	648.4	649.1	649.9	650.5	651.1	651.7	651.7	
17	652.2	652.5	653.1	653.7	654.3	654.7	655.1	655.3	655.3	655.4	655.5	655.2	654.5	653.9	653.2	652.6	651.9	651.6	651.5	651.2	651.0	650.5	650.0	649.7	655.5	
18	649.4	648.9	648.5	648.4	648.2	647.8	647.6	647.3	647.0	647.0	646.8	646.3	645.6	645.0	644.6	644.4	644.3	644.3	643.9	644.2	644.3	644.3	644.6	644.9	649.4	
19	645.0	645.0	645.0	645.1	645.2	645.1	644.8	644.7	644.5	644.2	643.9	643.5	643.0	642.6	642.3	642.3	642.5	642.8	643.0	643.3	643.3	643.1	643.2	643.3	645.2	
20	643.3	643.4	643.6	643.9	643.9	644.0	644.1	644.4	644.7	645.0	645.2	645.1	644.7	644.6	645.0	645.0	644.9	645.3	645.9	646.0	646.2	646.8	647.2	647.8	647.8	
21	648.2	648.6	648.9	649.0	649.4	649.5	649.4	649.2	649.0	648.6	648.5	648.0	647.4	646.9	647.0	647.4	647.4	647.3	647.2	647.0	646.7	646.5	646.4	646.1	647.9	
22	646.0	645.8	645.6	645.3	645.1	644.7	644.4	644.0	643.8	643.6	643.3	642.8	642.0	641.3	640.9	640.6	640.5	640.3	640.1	640.2	640.4	640.7	641.4	642.1	646.0	
23	643.5	644.7	645.8	646.9	647.5	648.3	649.2	649.7	650.3	651.2	651.9	652.3	652.4	652.6	652.8	653.1	653.4	653.8	654.3	654.5	654.6	654.8	654.7	654.7	651.1	
24	654.8	654.6	654.5	654.3	654.0	653.9	653.9	653.7	653.6	653.5	653.3	653.1	652.6	652.1	651.8	651.8	651.9	652.3	652.1	651.9	651.7	651.9	651.9	651.7	654.8	
25	651.8	652.0	652.0	652.4	652.8	652.4	652.6	653.4	653.5	653.5	653.3	653.2	652.8	652.0	651.6	651.5	651.2	651.5	651.6	651.6	651.1	650.8	650.6	650.6	653.5	
26	650.2	649.8	649.4	649.1	648.8	648.8	648.4	648.0	647.8	647.6	647.8	647.9	647.8	648.7	649.5	649.0	651.3	652.2	652.8	653.2	653.7	653.9	653.4	653.8	653.9	
27	654.1	653.7	653.7	653.7	653.7	653.3	652.9	652.7	652.5	652.3	651.9	651.2	650.1	649.3	649.3	649.2	649.4	649.6	649.1	648.5	648.6	648.4	648.5	648.7	651.0	
28	648.9	649.2	649.9	650.3	650.2	650.8	651.3	651.6	650.7	651.3	651.6	651.9	651.8	652.4	652.5	653.2	654.0	654.7	655.3	655.2	654.8	654.8	654.8	654.8	652.3	
29	655.0	655.3	655.1	655.0	654.8	654.9	655.0	655.0	655.2	655.2	655.0	654.5	653.9	653.5	653.2	652.9	652.8	652.8	652.6	652.5	652.3	652.1	652.0	652.0	653.9	
30	652.0	651.9	651.8	651.6	651.4	651.1	650.9	650.8	650.5	650.4	650.5	650.0	649.6	649.4	649.3	649.3	649.3	649.4	649.4	649.6	649.5	649.5	649.5	649.6	650.2	
31	649.5	649.5	649.5	649.6	649.4	649.3	649.3	649.3	649.5	649.6	649.8	649.8	649.6	649.4	649.3	649.4	649.5	649.6	649.7	650.0	650.1	650.2	650.4	650.7	649.7	
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	
MEAN	648.6	648.7	648.8	648.9	649.0	649.1	649.2	649.3	649.3	649.3	649.3	649.0	648.6	648.2	648.0	648.0	648.0	648.2	648.2	648.2	648.3	648.4	648.5	648.7	648.7	
MAX	656.0	656.1	656.5	656.7	656.9	657.1	657.0	656.8	656.8	656.7	656.5	656.2	655.3	655.0	654.9	654.7	654.6	654.8	655.3	655.2	654.9	655.1	655.4	655.8	655.8	



Number of Non-Zero Readings	744	Operational Time	744 HRS
Maximum 1-HR Average	657 MMHg	Operational Uptime	100.0 %
Maximum 24-HR Average	654 MMHg	Monthly Average	648.7 MMHg
Monthly Calibration	0		
Standard Deviation	4.917		

Lagoon Relative Humidity (%) – December 2023

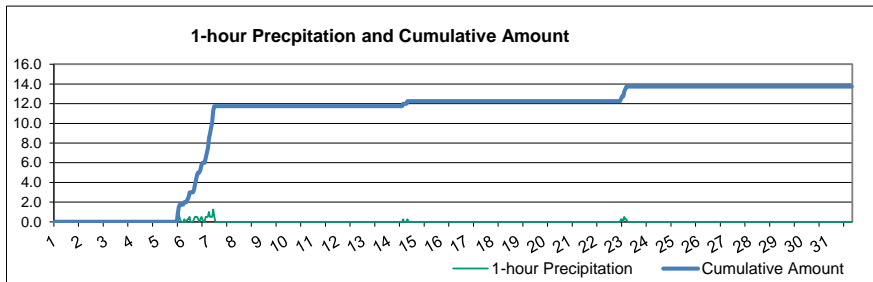
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	65.8	65.4	63.2	60.9	62.3	64.7	64.7	61.9	62.5	63.0	62.3	58.8	53.9	52.7	50.0	47.8	46.1	46.3	50.8	51.5	52.1	52.7	52.8	57.4	57.1	65.8	
2	56.7	56.4	56.3	51.6	46.2	45.3	48.4	49.4	52.2	51.8	53.7	51.6	53.8	55.1	50.7	47.0	48.4	48.5	49.2	48.1	50.7	47.2	45.6	42.8	50.3	56.7	
3	41.4	41.6	43.4	45.8	48.7	51.3	54.0	55.1	48.9	45.4	44.0	41.6	40.6	41.4	44.0	44.6	66.2	68.1	60.6	44.0	36.8	38.4	38.8	43.3	47.0	68.1	
4	48.6	51.4	49.5	51.5	52.0	50.0	50.7	51.3	49.9	46.4	41.3	41.8	40.6	39.7	38.6	40.0	45.9	51.5	57.9	59.4	59.5	56.4	62.0	63.1	50.0	63.1	
5	65.9	64.5	61.7	62.2	65.5	66.6	67.8	71.6	70.8	66.8	60.4	54.5	49.1	51.9	54.9	60.8	66.7	74.6	80.5	85.1	87.7	89.3	90.2	90.9	69.2	90.9	
6	90.1	89.6	89.6	89.1	89.1	89.2	89.2	89.1	89.5	90.0	90.2	90.0	90.2	89.9	89.4	90.4	91.1	91.5	91.1	91.6	91.6	91.5	92.2	92.6	90.3	92.6	
7	93.0	93.0	93.1	93.1	93.1	93.1	91.0	89.4	87.1	85.6	86.4	85.8	86.2	85.8	86.5	87.9	87.1	87.5	89.1	90.1	91.4	92.0	92.1	91.5	89.6	93.1	
8	91.3	91.1	90.9	90.8	91.1	90.9	90.6	90.7	90.9	91.0	91.0	90.2	89.0	87.4	87.7	88.4	88.8	89.2	89.6	82.9	75.8	75.3	75.8	77.0	87.4	91.3	
9	77.2	76.8	76.5	76.1	74.0	74.2	74.1	74.5	72.9	73.0	70.7	65.3	60.4	65.7	61.8	51.9	57.5	55.7	50.7	52.3	54.0	57.1	57.1	57.1	65.3	77.2	
10	57.2	57.3	55.6	56.3	55.3	56.3	55.1	55.8	57.1	58.4	56.8	55.4	54.9	55.0	54.6	56.4	58.8	61.6	66.9	70.0	70.2	74.0	73.7	74.4	60.3	74.4	
11	75.2	75.7	78.3	78.2	80.3	80.5	80.5	82.2	81.7	81.5	80.8	77.5	72.2	72.9	70.3	71.3	70.6	69.0	69.6	72.2	72.2	71.3	71.8	73.2	75.4	82.2	
12	72.8	73.3	74.0	73.9	74.3	73.4	72.6	73.3	73.4	75.3	73.0	67.4	64.3	63.3	60.1	59.7	59.7	63.7	64.3	64.8	64.0	63.3	63.4	62.1	67.9	75.3	
13	61.8	62.0	59.9	59.1	58.9	58.8	57.4	58.2	56.3	55.5	53.0	53.1	52.2	51.0	44.4	40.6	35.0	37.9	41.8	39.1	43.7	45.1	44.8	46.3	50.7	62.0	
14	50.4	53.6	55.2	58.7	62.6	63.7	65.0	68.0	69.5	70.9	77.0	82.4	85.6	86.0	87.0	88.0	88.9	89.3	89.0	88.9	87.0	82.8	81.8	80.4	75.5	89.3	
15	78.4	76.5	76.2	75.0	74.4	74.2	73.4	71.9	71.0	68.2	62.5	55.7	50.7	52.5	52.8	55.2	55.7	54.2	57.0	57.8	56.9	56.8	56.8	55.7	63.3	78.4	
16	51.6	45.0	43.0	40.4	34.0	36.2	37.6	40.3	46.9	55.9	55.8	47.0	44.1	43.3	41.8	41.2	44.2	46.9	47.9	49.2	51.8	52.6	52.4	52.8	45.9	55.9	
17	58.8	60.2	61.8	66.3	77.7	81.0	79.2	73.6	71.8	68.5	68.6	66.2	64.0	58.9	51.9	52.7	54.3	56.1	54.5	57.0	57.9	56.4	58.8	59.7	63.2	81.0	
18	59.7	62.9	60.7	63.1	66.4	67.5	68.0	69.7	72.1	73.0	72.2	70.4	69.6	68.8	68.0	67.3	68.5	68.6	68.8	70.8	71.2	71.2	71.7	76.5	68.6	76.5	
19	82.1	83.4	80.3	73.5	75.4	77.5	80.0	82.2	83.7	85.0	81.7	77.2	73.0	68.0	63.9	61.2	60.5	61.7	65.1	68.4	69.2	71.5	70.6	69.8	73.5	85.0	
20	68.9	69.3	64.8	62.8	62.4	65.4	65.6	67.0	68.1	66.2	62.7	55.3	51.3	50.4	48.6	47.0	44.3	47.0	50.2	54.7	53.4	51.8	45.6	50.5	57.2	69.3	
21	49.8	51.3	56.2	58.4	61.7	69.9	72.1	72.2	70.9	68.2	61.6	47.9	43.3	42.9	42.7	42.2	43.5	44.3	46.3	48.0	48.8	45.6	43.0	41.0	53.0	72.2	
22	42.6	42.8	42.8	42.2	42.0	42.1	42.9	43.8	44.4	45.0	44.3	38.9	38.1	37.4	36.8	36.4	36.6	37.0	38.4	44.0	50.0	55.0	65.6	72.6	44.2	72.6	
23	78.1	91.2	92.0	92.3	91.9	89.8	88.8	89.2	88.1	83.2	77.1	65.0	57.7	57.3	57.5	54.7	56.5	57.4	57.8	61.0	60.9	60.4	61.1	63.4	72.2	92.3	
24	64.9	64.0	65.5	66.0	64.3	65.0	67.5	69.1	68.9	69.5	67.2	61.2	57.2	55.2	51.5	50.7	50.5	55.8	59.4	60.0	63.0	66.1	66.9	64.4	62.2	69.5	
25	63.9	62.9	62.3	60.1	60.0	60.4	59.7	58.7	61.5	60.3	57.6	52.5	47.8	43.3	41.3	42.4	40.7	40.2	47.4	51.1	52.8	55.3	55.2	56.4	53.9	63.9	
26	57.8	58.2	56.8	58.7	59.9	62.5	64.0	62.9	64.4	64.1	57.7	47.9	38.1	36.3	34.9	33.8	36.9	38.4	39.3	43.7	45.4	50.8	54.9	51.9	50.8	64.4	
27	56.2	61.2	62.3	64.9	64.7	64.7	66.0	67.2	67.7	69.2	70.9	65.3	60.7	56.8	54.4	52.8	53.3	58.3	58.4	56.4	56.2	57.7	58.4	59.4	61.0	70.9	
28	59.2	60.1	61.2	62.2	63.6	63.2	65.9	64.5	54.5	53.5	51.3	46.6	38.8	36.9	36.6	38.6	38.4	43.0	51.5	52.3	57.5	61.7	61.3	61.3	53.5	65.9	
29	63.1	62.7	62.8	61.6	64.5	66.8	70.0	72.1	73.1	73.4	72.8	67.5	62.2	60.0	57.7	60.5	63.4	64.7	66.2	67.6	68.5	68.5	70.8	71.4	66.3	73.4	
30	72.5	73.9	74.0	73.0	73.4	73.2	72.3	73.1	74.0	74.8	73.1	69.1	65.5	64.0	63.2	60.9	61.1	63.3	65.4	68.3	69.6	69.8	70.7	69.8	69.5	74.8	
31	70.6	70.2	68.6	68.0	66.9	69.1	70.3	72.3	73.7	73.5	73.3	73.0	70.0	66.9	66.1	64.7	61.2	63.1	63.9	67.6	66.5	66.7	67.3	67.4	68.4	73.7	
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100.0%	
MEAN	65.3	66.1	65.8	65.7	66.4	67.3	67.9	68.4	68.3	67.9	66.2	62.0	58.9	58.0	56.4	56.0	57.4	59.2	60.9	61.9	62.5	63.0	63.7	64.4			
MAX	93.0	93.0	93.1	93.1	93.1	93.1	91.0	90.7	90.9	91.0	91.0	90.2	89.9	89.4	90.4	91.1	91.5	91.1	91.6	91.6	92.0	92.2	92.6				



Number of Non-Zero Readings	744
Maximum 1-HR Average	93.1 %
Maximum 24-HR Average	90.3 %
Operational Time	744 HRS
Monthly Calibration	0
Operational Uptime	100.0 %
Standard Deviation	14.49
Monthly Average	63.3 %

Lagoon Precipitation (mm) – December 2023

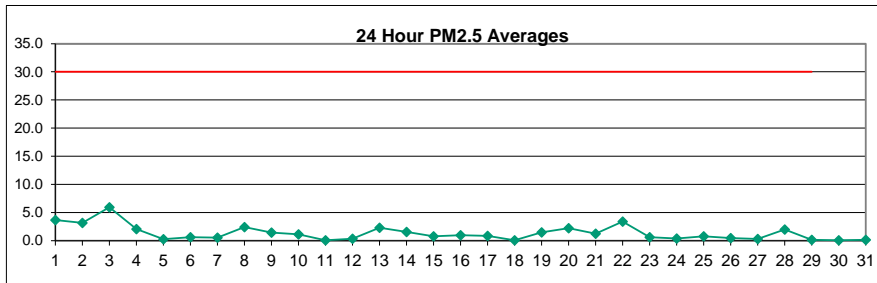
Day	HOUR																								DAILY MAX 24-HOUR TOTAL				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.3	0.0	0.0	0.0	0.0	0.0		
6	0.0	0.3	0.0	0.0	0.3	0.3	0.5	0.0	0.0	0.0	0.3	0.5	0.5	0.5	0.3	0.0	0.3	0.5	0.3	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5		
7	1.0	0.5	0.5	0.5	1.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
23	0.3	0.3	0.0	0.5	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	744	100%
MEAN	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
MAX	1.0	0.5	0.5	0.5	1.3	0.5	0.5	0.0	0.0	0.0	0.3	0.5	0.5	0.5	0.3	0.0	0.3	0.5	0.3	0.8	0.8	0.5	0.5	0.5	0.5	0.5	0.5		



Number of Non-Zero Readings	31		
Maximum 1-HR Average	5.8 MM		
Maximum 24-HR Average	1.3 MM		
Monthly Calibration	0	Operational Time	744 HRS
Standard Deviation	0.101	Operational Uptime	100.0 %
		Monthly Average	0.02 MM

Windridge PM_{2.5} (µg/m³) – December 2023

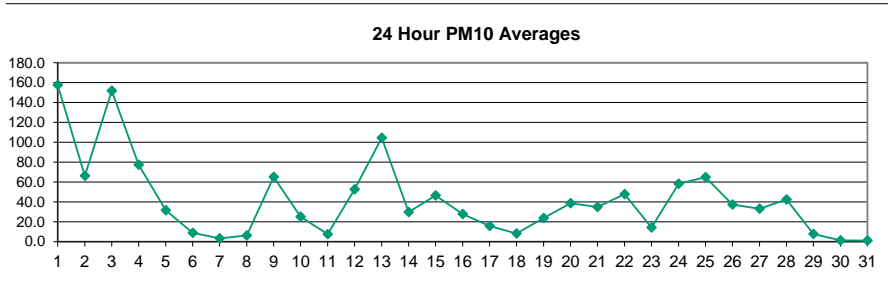
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	2.0	0.0	3.0	6.0	4.0	1.0	0.0	8.0	8.0	8.0	5.0	3.0	4.0	7.0	6.0	5.0	4.0	3.0	3.0	2.0	1.0	0.0	1.0	3.7	8.0		
2	3.0	2.0	0.0	0.0	0.0	0.0	1.0	2.0	2.0	0.0	3.0	6.0	5.0	4.0	6.0	6.0	3.0	4.0	2.0	5.0	6.0	6.0	5.0	3.2	6.0		
3	4.0	2.0	3.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	30.0	23.0	15.0	8.0	8.0	4.0	17.0	12.0	6.0	3.0	2.0	5.9	30.0	
4	2.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	3.0	4.0	5.0	5.0	4.0	6.0	3.0	0.0	0.0	4.0	3.0	0.0	1.0	1.0	2.0	6.0		
5	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.0	
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	4.0	2.0	3.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.6	4.0	
7	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0	2.0	4.0	2.0	0.0	0.0	0.5	4.0	
8	0.0	0.0	3.0	2.0	3.0	1.0	0.0	1.0	3.0	1.0	3.0	3.0	5.0	4.0	5.0	7.0	4.0	5.0	6.0	2.0	0.0	0.0	0.0	0.0	2.4	7.0	
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	8.0	11.0	5.0	1.0	1.0	3.0	1.4	11.0	
10	2.0	5.0	4.0	0.0	0.0	3.0	5.0	4.0	2.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	5.0	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.3	3.0	
13	4.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	2.0	11.0	10.0	7.0	6.0	3.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	11.0	
14	1.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	6.0	5.0	1.0	0.0	0.0	3.0	2.0	2.0	3.0	3.0	5.0	3.0	0.0	0.0	1.0	1.5	6.0		
15	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	3.0	3.0	1.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.8	3.0		
16	0.0	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	3.0	2.0	3.0	3.0	1.0	1.0	3.0	3.0	
17	0.0	0.0	0.0	0.0	1.0	2.0	3.0	4.0	2.0	1.0	0.0	0.0	0.0	0.0	1.0	0.0	1.0	2.0	2.0	1.0	0.0	0.0	0.0	0.8	4.0		
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
19	1.0	1.0	2.0	4.0	4.0	3.0	3.0	2.0	2.0	4.0	4.0	2.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	1.5	4.0	
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	10.0	6.0	4.0	6.0	7.0	6.0	4.0	4.0	3.0	0.0	0.0	1.0	1.0	0.0	2.2	10.0	
21	0.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	C	C	4.0	3.0	6.0	4.0	5.0	3.0	0.0	0.0	0.0	1.2	6.0		
22	6.0	7.0	9.0	5.0	3.0	1.0	0.0	1.0	5.0	4.0	6.0	7.0	6.0	5.0	6.0	5.0	4.0	1.0	0.0	0.0	0.0	0.0	0.0	3.4	9.0		
23	4.0	3.0	1.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	0.0	0.0	0.0	0.0	0.6	4.0		
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	3.0	2.0	0.0	0.0	0.0	0.0	2.0	1.0	0.4	3.0		
25	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	6.0	3.0	0.0	0.0	0.0	0.8	6.0		
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	4.0	3.0	0.0	0.0	0.0	2.0	0.5	4.0		
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	4.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	4.0		
28	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	4.0	6.0	6.0	9.0	6.0	6.0	3.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	2.0	9.0		
29	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.1	1.0		
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	
31	0.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.1	1.0		
NO.	31	31	31	31	31	31	31	31	31	31	31	31	30	30	31	31	31	31	31	31	31	31	31	742	100.0%		
MEAN	1.1	0.8	0.8	0.7	0.6	0.5	0.5	1.0	1.3	1.4	1.8	1.6	1.9	2.7	2.8	2.3	1.5	1.4	1.6	2.0	1.3	0.8	0.6	0.6	7.5	7.5	
MAX	6.0	7.0	9.0	6.0	4.0	3.0	5.0	8.0	8.0	11.0	10.0	7.0	9.0	30.0	23.0	15.0	8.0	8.0	8.0	17.0	12.0	6.0	6.0	5.0	17.4	70.0	



Number of 24HR Exceedences	0	Proposed Guideline	
Number of Non-Zero Readings	283		
Maximum 1-HR Average	30.0 UG/M3		
Maximum 24-HR Average	5.9 UG/M3		
Monthly Calibration	2	Operational Time	744 HRS
Standard Deviation	2.6	Operational Uptime	100.0 %
		Monthly Average	1.3 UG/M3

Windridge PM₁₀ (µg/m³) – December 2023

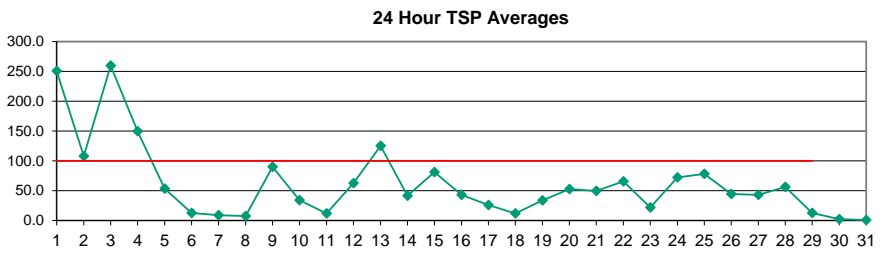
Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	80.0	54.0	152.0	203.0	174.0	164.0	185.0	485.0	322.0	434.0	256.0	188.0	104.0	103.0	175.0	106.0	98.0	91.0	92.0	81.0	49.0	81.0	55.0	51.0	157.6	485.0	
2	75.0	95.0	96.0	74.0	75.0	46.0	105.0	76.0	97.0	82.0	82.0	84.0	66.0	66.0	58.0	52.0	52.0	32.0	8.0	63.0	17.0	56.0	51.0	81.0	66.2	105.0	
3	53.0	54.0	114.0	69.0	27.0	5.0	4.0	4.0	27.0	6.0	59.0	67.0	280.0	485.0	485.0	374.0	265.0	75.0	63.0	485.0	425.0	97.0	59.0	62.0	151.8	485.0	
4	26.0	57.0	19.0	5.0	23.0	7.0	7.0	4.0	70.0	65.0	76.0	109.0	93.0	89.0	63.0	158.0	49.0	80.0	126.0	162.0	118.0	115.0	213.0	123.0	77.4	213.0	
5	83.0	53.0	16.0	26.0	74.0	76.0	55.0	9.0	7.0	34.0	48.0	42.0	43.0	76.0	35.0	22.0	9.0	6.0	4.0	1.0	20.0	13.0	4.0	1.0	31.5	83.0	
6	2.0	0.0	3.0	1.0	0.0	0.0	1.0	4.0	16.0	20.0	8.0	11.0	11.0	9.0	24.0	18.0	51.0	4.0	3.0	2.0	7.0	7.0	7.0	4.0	8.9	51.0	
7	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	4.0	6.0	5.0	9.0	5.0	1.0	1.0	0.0	1.0	11.0	10.0	8.0	5.0	4.0	3.3	11.0	
8	2.0	0.0	1.0	2.0	2.0	7.0	7.0	5.0	5.0	9.0	7.0	7.0	8.0	7.0	10.0	6.0	7.0	5.0	1.0	13.0	22.0	4.0	3.0	6.0	6.0	22.0	3.0
9	3.0	9.0	10.0	9.0	31.0	13.0	11.0	8.0	20.0	24.0	32.0	92.0	52.0	56.0	33.0	31.0	41.0	65.0	300.0	333.0	137.0	83.0	99.0	72.0	65.2	333.0	
10	57.0	49.0	47.0	36.0	48.0	54.0	49.0	23.0	13.0	37.0	42.0	25.0	22.0	19.0	9.0	9.0	30.0	4.0	4.0	6.0	7.0	5.0	3.0	1.0	25.0	57.0	
11	1.0	0.0	0.0	0.0	2.0	1.0	0.0	4.0	13.0	13.0	27.0	11.0	15.0	12.0	14.0	19.0	12.0	9.0	15.0	7.0	3.0	1.0	0.0	0.0	7.5	27.0	
12	5.0	4.0	1.0	3.0	6.0	8.0	24.0	24.0	60.0	16.0	23.0	26.0	112.0	134.0	157.0	40.0	52.0	22.0	29.0	71.0	136.0	128.0	71.0	109.0	52.5	157.0	
13	117.0	70.0	85.0	90.0	48.0	102.0	284.0	206.0	237.0	313.0	269.0	158.0	109.0	133.0	96.0	80.0	37.0	32.0	10.0	7.0	6.0	7.0	5.0	5.0	104.4	313.0	
14	5.0	4.0	3.0	4.0	5.0	5.0	18.0	84.0	33.0	75.0	72.0	57.0	65.0	69.0	42.0	43.0	36.0	20.0	24.0	20.0	5.0	6.0	5.0	11.0	29.6	84.0	
15	18.0	1.0	5.0	5.0	0.0	0.0	0.0	42.0	18.0	23.0	39.0	30.0	36.0	46.0	35.0	29.0	32.0	278.0	171.0	142.0	86.0	23.0	30.0	23.0	46.3	278.0	
16	28.0	20.0	27.0	30.0	30.0	14.0	10.0	7.0	20.0	6.0	16.0	21.0	25.0	37.0	59.0	87.0	42.0	24.0	32.0	29.0	31.0	30.0	21.0	18.0	27.7	87.0	
17	0.0	0.0	5.0	5.0	4.0	6.0	4.0	1.0	2.0	2.0	1.0	3.0	12.0	8.0	19.0	29.0	36.0	29.0	38.0	31.0	33.0	34.0	49.0	27.0	15.8	49.0	
18	38.0	15.0	22.0	11.0	7.0	4.0	2.0	1.0	4.0	3.0	2.0	7.0	8.0	5.0	10.0	13.0	8.0	6.0	6.0	4.0	1.0	2.0	6.0	12.0	8.2	38.0	
19	11.0	6.0	8.0	24.0	53.0	46.0	40.0	15.0	15.0	46.0	31.0	14.0	38.0	38.0	33.0	41.0	45.0	28.0	9.0	6.0	5.0	5.0	4.0	10.0	23.8	53.0	
20	8.0	12.0	10.0	9.0	28.0	16.0	18.0	19.0	13.0	26.0	111.0	56.0	71.0	65.0	73.0	59.0	48.0	36.0	22.0	38.0	42.0	54.0	59.0	33.0	38.6	111.0	
21	13.0	7.0	9.0	18.0	5.0	12.0	21.0	13.0	7.0	10.0	33.0	33.0	C	C	60.0	69.0	85.0	62.0	60.0	53.0	44.0	47.0	49.0	55.0	34.8	85.0	
22	93.0	75.0	55.0	43.0	42.0	39.0	29.0	52.0	70.0	67.0	90.0	179.0	55.0	41.0	55.0	62.0	32.0	19.0	10.0	8.0	4.0	8.0	8.0	7.0	47.6	179.0	
23	53.0	11.0	6.0	5.0	8.0	3.0	1.0	6.0	9.0	6.0	10.0	20.0	9.0	19.0	21.0	4.0	19.0	29.0	14.0	10.0	6.0	14.0	36.0	22.0	14.2	53.0	
24	8.0	16.0	45.0	39.0	53.0	46.0	143.0	77.0	92.0	64.0	72.0	35.0	23.0	63.0	105.0	52.0	46.0	21.0	32.0	82.0	61.0	92.0	49.0	81.0	58.2	143.0	
25	47.0	23.0	11.0	8.0	4.0	34.0	33.0	3.0	3.0	7.0	30.0	33.0	14.0	35.0	37.0	62.0	126.0	165.0	225.0	198.0	172.0	58.0	140.0	87.0	64.8	225.0	
26	45.0	32.0	83.0	27.0	61.0	32.0	22.0	23.0	18.0	28.0	28.0	24.0	148.0	57.0	52.0	25.0	33.0	37.0	29.0	27.0	5.0	7.0	29.0	25.0	37.4	148.0	
27	2.0	1.0	3.0	10.0	7.0	3.0	6.0	7.0	3.0	16.0	11.0	54.0	191.0	196.0	53.0	22.0	10.0	5.0	19.0	69.0	59.0	27.0	13.0	8.0	33.1	196.0	
28	4.0	5.0	4.0	2.0	1.0	0.0	1.0	4.0	191.0	152.0	105.0	64.0	132.0	120.0	117.0	32.0	28.0	6.0	3.0	4.0	26.0	6.0	6.0	6.0	42.5	191.0	
29	6.0	10.0	7.0	3.0	0.0	0.0	2.0	6.0	3.0	8.0	15.0	12.0	13.0	25.0	33.0	9.0	6.0	4.0	5.0	5.0	5.0	1.0	3.0	2.0	7.6	33.0	
30	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0	1.0	3.0	2.0	0.0	2.0	3.0	2.0	5.0	3.0	1.0	1.0	2.0	0.0	1.2	5.0	
31	0.0	0.0	0.0	0.0	0.0	1.0	3.0	0.0	0.0	1.0	0.0	0.0	3.0	3.0	0.0	0.0	5.0	3.0	1.0	1.0	2.0	0.0	0.0	0.0	1.0	5.0	
NO.	31	31	31	31	31	31	31	31	31	31	31	31	30	30	31	31	31	31	31	31	31	31	31	31	742	100.0%	
MEAN	28.5	22.1	27.4	24.5	26.4	24.0	35.0	39.1	44.8	51.5	51.6	47.4	58.8	67.6	63.4	50.3	43.3	38.7	44.0	63.2	49.5	33.5	35.0	30.4	42.0		
MAX	117.0	95.0	152.0	203.0	174.0	164.0	284.0	485.0	322.0	434.0	269.0	188.0	280.0	485.0	485.0	374.0	265.0	278.0	300.0	485.0	425.0	128.0	213.0	123.0	91.1	433.3	



Number of Non-Zero Readings	693
Maximum 1-HR Average	485.0 UG/M3
Maximum 24-HR Average	157.6 UG/M3
Operational Time	744 HRS
Operational Uptime	100.0 %
Monthly Calibration	2
Standard Deviation	65.04
Monthly Average	41.6 UG/M3

Windridge TSP ($\mu\text{g}/\text{m}^3$) – December 2023

Day	HOUR																								MEAN	MAX	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	146.0	117.0	318.0	370.0	259.0	261.0	293.0	767.0	480.0	548.0	354.0	267.0	163.0	179.0	264.0	176.0	175.0	172.0	166.0	132.0	96.0	132.0	93.0	89.0	250.7	767.0	
2	143.0	184.0	133.0	134.0	139.0	76.0	190.0	117.0	143.0	127.0	121.0	127.0	121.0	96.0	85.0	71.0	78.0	46.0	17.0	80.0	29.0	84.0	85.0	162.0	107.8	190.0	
3	98.0	82.0	176.0	98.0	45.0	11.0	8.0	4.0	34.0	17.0	83.0	125.0	460.0	985.0	985.0	600.0	413.0	104.0	101.0	782.0	667.0	139.0	113.0	100.0	259.6	985.0	
4	43.0	81.0	25.0	4.0	33.0	13.0	9.0	9.0	104.0	98.0	134.0	201.0	181.0	170.0	114.0	460.0	104.0	188.0	276.0	348.0	217.0	229.0	322.0	224.0	149.5	460.0	
5	144.0	88.0	21.0	35.0	78.0	117.0	84.0	16.0	9.0	68.0	96.0	75.0	79.0	160.0	77.0	38.0	25.0	8.0	4.0	1.0	26.0	12.0	8.0	5.0	53.1	160.0	
6	2.0	4.0	6.0	3.0	0.0	1.0	0.0	11.0	28.0	27.0	14.0	14.0	15.0	8.0	34.0	29.0	69.0	11.0	5.0	2.0	5.0	3.0	4.0	5.0	12.5	69.0	
7	2.0	2.0	1.0	3.0	5.0	3.0	1.0	15.0	38.0	37.0	28.0	11.0	11.0	16.0	3.0	0.0	0.0	5.0	3.0	6.0	8.0	6.0	6.0	2.0	8.8	38.0	
8	3.0	3.0	1.0	4.0	6.0	3.0	6.0	7.0	6.0	6.0	18.0	8.0	8.0	6.0	9.0	9.0	6.0	8.0	5.0	3.0	12.0	23.0	10.0	7.0	7.4	23.0	
9	10.0	25.0	42.0	22.0	59.0	26.0	16.0	14.0	25.0	33.0	49.0	129.0	77.0	76.0	53.0	41.0	47.0	85.0	423.0	422.0	158.0	111.0	124.0	87.0	89.8	423.0	
10	68.0	64.0	57.0	48.0	52.0	44.0	162.0	32.0	17.0	48.0	54.0	33.0	19.0	30.0	18.0	11.0	38.0	7.0	4.0	1.0	5.0	3.0	1.0	2.0	34.1	162.0	
11	0.0	0.0	3.0	3.0	1.0	0.0	3.0	11.0	22.0	28.0	32.0	9.0	29.0	16.0	35.0	27.0	13.0	9.0	17.0	3.0	3.0	2.0	6.0	7.0	11.6	35.0	
12	5.0	8.0	5.0	3.0	2.0	5.0	24.0	7.0	8.0	19.0	6.0	44.0	152.0	163.0	166.0	64.0	40.0	7.0	46.0	110.0	170.0	202.0	81.0	165.0	62.6	202.0	
13	104.0	87.0	117.0	83.0	64.0	128.0	330.0	245.0	218.0	352.0	330.0	176.0	147.0	179.0	140.0	127.0	66.0	55.0	14.0	11.0	13.0	9.0	7.0	5.0	125.3	352.0	
14	3.0	1.0	6.0	7.0	5.0	3.0	37.0	150.0	64.0	131.0	101.0	65.0	48.0	92.0	70.0	67.0	63.0	16.0	23.0	18.0	3.0	1.0	2.0	15.0	41.3	150.0	
15	18.0	8.0	7.0	2.0	1.0	5.0	3.0	63.0	30.0	37.0	52.0	51.0	56.0	68.0	59.0	69.0	63.0	602.0	320.0	201.0	110.0	39.0	44.0	40.0	81.2	602.0	
16	36.0	29.0	47.0	44.0	50.0	26.0	17.0	11.0	22.0	19.0	23.0	33.0	31.0	71.0	91.0	113.0	70.0	50.0	65.0	50.0	43.0	43.0	30.0	16.0	42.9	113.0	
17	0.0	0.0	3.0	0.0	9.0	10.0	6.0	2.0	6.0	2.0	2.0	4.0	13.0	23.0	29.0	51.0	53.0	48.0	49.0	45.0	66.0	56.0	85.0	58.0	25.8	85.0	
18	63.0	22.0	31.0	13.0	8.0	2.0	1.0	4.0	5.0	5.0	6.0	9.0	9.0	7.0	18.0	21.0	6.0	6.0	5.0	2.0	3.0	7.0	4.0	20.0	11.5	63.0	
19	6.0	5.0	14.0	30.0	65.0	64.0	60.0	19.0	27.0	67.0	39.0	14.0	62.0	72.0	56.0	61.0	59.0	37.0	18.0	3.0	4.0	1.0	13.0	14.0	33.8	72.0	
20	12.0	17.0	12.0	13.0	39.0	24.0	30.0	23.0	18.0	37.0	124.0	82.0	102.0	99.0	96.0	78.0	65.0	51.0	24.0	46.0	63.0	64.0	92.0	51.0	52.6	124.0	
21	10.0	6.0	11.0	24.0	6.0	31.0	40.0	18.0	6.0	16.0	56.0	56.0	C	C	88.0	96.0	107.0	94.0	94.0	70.0	61.0	59.0	71.0	72.0	49.6	107.0	
22	118.0	92.0	70.0	49.0	52.0	48.0	45.0	72.0	88.0	93.0	125.0	271.0	80.0	57.0	73.0	85.0	53.0	38.0	20.0	7.0	6.0	11.0	6.0	8.0	65.3	271.0	
23	139.0	35.0	12.0	13.0	12.0	5.0	1.0	7.0	16.0	5.0	17.0	7.0	7.0	25.0	29.0	14.0	17.0	42.0	17.0	7.0	8.0	21.0	42.0	24.0	21.8	139.0	
24	12.0	27.0	46.0	39.0	63.0	50.0	139.0	85.0	85.0	82.0	90.0	54.0	36.0	64.0	101.0	60.0	65.0	33.0	39.0	132.0	104.0	136.0	76.0	113.0	72.1	80.0	
25	62.0	20.0	24.0	11.0	6.0	45.0	49.0	4.0	3.0	5.0	34.0	41.0	15.0	52.0	43.0	67.0	160.0	212.0	312.0	235.0	212.0	78.0	107.0	80.0	78.2	312.0	
26	40.0	22.0	57.0	37.0	49.0	35.0	24.0	27.0	20.0	32.0	46.0	53.0	146.0	75.0	83.0	37.0	48.0	49.0	45.0	37.0	1.0	6.0	41.0	51.0	44.2	146.0	
27	3.0	2.0	3.0	12.0	7.0	2.0	15.0	3.0	2.0	14.0	11.0	78.0	308.0	228.0	82.0	19.0	12.0	6.0	26.0	80.0	59.0	33.0	20.0	4.0	42.9	308.0	
28	5.0	7.0	4.0	0.0	1.0	0.0	2.0	4.0	297.0	218.0	149.0	77.0	133.0	148.0	148.0	51.0	36.0	5.0	4.0	8.0	30.0	6.0	4.0	8.0	56.0	297.0	
29	8.0	20.0	15.0	8.0	5.0	3.0	1.0	4.0	3.0	24.0	31.0	19.0	18.0	36.0	64.0	9.0	11.0	9.0	6.0	3.0	1.0	0.0	0.0	0.0	12.4	64.0	
30	0.0	1.0	2.0	0.0	0.0	0.0	1.0	1.0	0.0	2.0	2.0	1.0	5.0	4.0	3.0	5.0	2.0	0.0	12.0	7.0	1.0	0.0	0.0	0.0	2.0	12.0	12.0
31	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	4.0	2.0	1.0	2.0	0.0	0.0	0.0	2.0	3.0	2.0	0.0	0.8	4.0	
NO.	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	742	100.0%	
MEAN	42.0	34.2	40.9	35.9	36.2	33.6	51.5	56.5	58.8	70.9	71.8	68.8	84.4	107.0	100.6	82.5	63.4	64.6	69.7	92.0	70.5	49.0	48.4	46.3			
MAX	146.0	184.0	318.0	370.0	259.0	261.0	330.0	767.0	480.0	548.0	354.0	271.0	460.0	985.0	985.0	600.0	413.0	602.0	423.0	782.0	667.0	229.0	322.0	224.0			



Number of 24HR Exceedences	5	Proposed Guideline
Number of Non-Zero Readings	703	
Maximum 1-HR Average	985.0 UG/M3	
Maximum 24-HR Average	259.6 UG/M3	
IZS Calibration Time		Operational Time 744 HRS
Down Time	0	Operational Uptime 100.0 %
Standard Deviation	103.9	Monthly Average 61.6 UG/M3